Are Australia's Foreign Investment Inflows Significantly Higher Following the Introduction of A-IFRS?

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STATEMENT OF ORGINIAL AUTHORSHIP

The work contained in this thesis has not been previously submitted to meet the requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature _____

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ABSTRACT

In June 2002, the Australian Financial Reporting Council (FRC) made the decision to adopt the Australian equivalent of the International Financial Reporting Standards (A-IFRS). A-IFRS became mandatory on the 1st of January 2005, for all companies reporting in Australia. The primary aim of converging to international accounting standards was to "*facilitate cross-border comparisons by investors, and enable Australian companies to access international capital markets …"* (Commonwealth of Australia, 2002, p. 102). Accounting information is critical for investment decision making. However, as there is considerable variation in accounting standards and disclosure requirements from country to country, foreign investors are aware of being informationally disadvantaged, compared to local investors. A single accounting regime, such as International Financial Reporting Standards (IFRS), is, therefore, expected to reduce the differences in accounting standards between countries, increase the comparability of accounting information, enhance investors' understanding of the financial reporting of the host country, and increase foreign investor confidence in investing in the host country. The main argument advanced for the application of IFRS by a developed country such as Australia, which has existing high-quality accounting standards, was to improve foreign investment inflows.

A broad research question is developed to assess whether foreign investment inflows to Australia increased following the introduction of A-IFRS, a phenomenon known as 'economic consequences' in the accounting literature (Zeff, 1978). These 'economic consequences' reflect the changes in the decision-making behaviour of foreign investors, as discussed in this thesis, following the changes in accounting standards to A-IFRS. Building on the finance and accounting literature, the question is further developed for each individual component of foreign investment inflows (i.e. portfolio equity, direct equity, direct debt (between the affiliates), portfolio debt, loans, derivatives, and other debt) to consider how each component can be affected differently, and why. Thus, this thesis aims to examine the economic consequences of A-IFRS on each component of foreign investment inflows.

A number of features make Australia an ideal country for which to examine foreign investment inflows. Firstly, prior to A-IFRS, Australia had a high-quality set of accounting standards, similar to IFRS. Secondly, with the sound governance of local institutions, strong legal enforcement, and a developed open market, Australia is more likely to have increased foreign investment inflows. Thirdly, Australia implemented A-IFRS as a national-level policy, whereby Australian accounting standards have legislative backing. This means that all entities, both public and private, must prepare their financial statements according to A-IFRS. Therefore, the use of macro-level data, rather than micro-level observations, produces results that are valid as a level of analysis for this country.

Using the quarterly aggregated and disaggregated series of foreign investment inflows from 1998Q1 to 2012Q4, the research design of the study consists of two stages. In the first stage, a structural break test is used to identify whether there is any break point around the A-IFRS application period in the data series. Previous studies have used dummy variables to capture the period of IFRS application by taking a value of 1 for the post-application period and 0 for the pre-application period. These studies, however, tend to pre-select the date of effect. Previous studies have indicated that the reaction of

foreign investors toward public information can differ depending on the type of investment, which reflects their role in the entities in which they invest. Therefore, they may not respond to the use of A-IFRS on the same date. Hence, an endogenous structural break test is used to detect any break endogenously; in other words, the selection of the break is led by the data. Because the data covers 24 years, more than one structural break is strongly anticipated. Therefore, an endogenous multiple structural break test is applied. To determine whether the identified break point can be associated with A-IFRS, an event window is constructed from 2004Q3 to 2007Q3, taking into consideration the transition, consolidation, and mandated reporting time lines.

The structural break test is a univariate approach, in which any break identified within the A-IFRS event window could be associated with any other economic events that occurred around that time. The magnitude of the changes observed in the foreign inflow variables could be explained by the commodity-price boom experienced in Australia in 2003/2004. The increase in inflows could also be explained by other factors such as the increased growth rate, rising interest rates, improved terms of trade, and the appreciation of the Australian dollar to a 30-year high. Therefore, in the second stage of the empirical analysis, an Autoregressive Distributed Lag (ARDL) model is developed to control for other possible events and to assess the effects of A-IFRS by including macroeconomic variables: real gross domestic product (RGDP), terms of trade (TOT), economic openness (OPEN), real exchange rate (EXCH) and lending rate (INT), and other global financial crises. The combined empirical evidence of both methods provides comprehensive insights into the effect of the application of A-IFRS on foreign investment inflows.

Consistent with expectations, the multiple structural break test indicates the presence of a break around 2004Q4 for aggregated foreign investment. Disaggregating this inflow further into debt and equity components allows any early or late implementation effects to be assessed. Portfolio equity and loans appear to have a positive break during A-IFRS implementation (2005Q3), while portfolio debt (2004 Q3) appears early during the transition period, which may reflect the importance of accounting reports in decision making for such components. The remaining foreign investment inflows indicate implementation lags around 2007. As expected, the only exception is direct equity, which indicates a structural break outside the event window (2003Q4). The endogenously determined structural breaks are tested further using the ARDL model. With the exceptions of other foreign debt and foreign direct equity, the results confirm a significant association between A-IFRS and foreign investment inflows such as portfolio (debt and equity), loans, derivatives, and direct debt. These findings strongly suggest that A-IFRS application may indeed have played a significant role in enhancing public information and increasing foreign debt and equity inflows. The findings highlight the fact that, in order to facilitate cross-border investment flows, it is vital to resolve the differences in accounting standards, thereby echoing the prediction of the Commonwealth of Australia (2002), mentioned above.

This thesis has broad implications for the accounting literature and for event studies. Firstly, instead of focusing on cross-sectional analysis, this thesis uses time-series, multiple endogenous structural break tests and controls for macroeconomic conditions using an ARDL model. These methods could also be applied at the firm level, to provide a better understanding of the effects of the implementation of any given set of

accounting standards. Secondly, the findings are potentially useful to the International Accounting Standards Board (IASB) in its quest for a strategy to facilitate the global application of IFRS. Thirdly, the findings are important for any other country considering the application of IFRS, for both developed and developing countries, and for global stakeholders and lending agencies such as the IMF and the World Bank, which are important 'foreign investment providers' (providing aid loans) for developing countries. Fourthly, the findings are also important for the Australian Accounting Standards Board (AASB) and others, including the Department of Foreign Affairs and Trade (DFAT) and the Australian Taxation Office (ATO), as they provide a better understanding of the effects of A-IFRS on various investment inflows, debt and equity.

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GLOSSARY

A-GAAP Australian Generally Accepted Accounting Principles
A-IFRS Australian International Financial Reporting Standards
AARF Australian Accounting Research Foundation
AASB Australian Accounting Standards Board
AASC Australian Accounting Standards Committee
AISG Accountants' International Study Group
ASC Australian Securities Commission
AFC Asian Financial Crisis
ASIC Australian Securities and Investment Commission
ASRB Accounting Standards Review Board
ASX Australian Stock Exchange
ASE Australian Securities Exchange
ATO Australian Taxation Office
BOP Balance of Payment
CLERP Corporate Law Economic Reform Program
CPB Commodity-Price Boom
DFAT Department of Foreign Affairs and Trade
EC European Commission
EU European Union
EXCH Real Exchange Rate
FASB Financial Accounting Standards Board (US)
FDD Foreign Direct Debt
FDE Foreign Direct Equity
FDR Foreign Derivatives
FL Foreign Loan
FPD Foreign Portfolio Debt
FPE Foreign Portfolio Equity
FRC Financial Reporting Council
G4 Group of 4 (standard setters – Australia, Canada, UK, US)
G4+1 Group of 4 plus the IASC
GFC Global Financial Crisis
GFL Global Financial Liberalisation
GST Goods and Service Tax
IASB International Accounting Standards Board
IASC International Accounting Standards Committee
IFRS International Financial Reporting Standards
IIP International Investment Position
IMF International Monty Fund
INT Lending Rate
IOSCO International Organisation of Securities Commissions
MNC Multinational Companies
MFC Mexican Financial Crisis
OECD Organisation for Economic Co-operation and Development
OFD Other Foreign Debt
OPEN Economic Openness
RGDP Real Gross Domestic Product
SEC Securities and Exchange Commission (US)
TFD Total Foreign Debt
TFE Total Foreign Equity
TFI Total Foreign Investment
TOT Term of Trade
UN United Nations
US GAAP US Generally Accepted Accounting Principles
WB World Bank
WTO World Trade Organisation

CHAPTER1: Introduction

1.1 Background

Developments in information and communication technology have led economies becoming globally integrated. Such technology provides the infrastructure that enables financial centres around the world to be networked, permitting the rapid investment of capital across borders (Castells, 2011). Critical to this process is accounting information, as it provides *"financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity"* (IASB, 2010, p.9). However, as there is considerable variation in accounting standards and disclosure requirements, from country to country, foreign investors are aware of being informationally disadvantaged. Such an information gap could be addressed by the introduction of a single accounting regime, the International Financial Reporting Standards (IFRS). By reducing inter-country differences in accounting standards, this should increase the comparability of accounting information, thereby, enhancing investors' understanding of international financial reporting and, thus, increasing investor confidence in investing abroad (Beneish & Yohn, 2008).

In June 2002, the Australian Financial Reporting Council (FRC) made the decision to apply the Australian equivalent of the International Financial Reporting Standards (A-IFRS), on 1st January 2005. The primary aim of these standards was to *"facilitate cross-border comparisons by investors, and enable Australian companies to access international capital markets…"* (Commonwealth of Australia, 2002, p.102). However, as indicated by previous studies, investors are not equal in terms of their objectives,

needs, or even their roles in the entities. Therefore, they may react differently to any change in accounting standards (Razin, Sadka, & Yuen, 1998). In view of this, the present thesis aims to conduct an empirical investigation to determine whether the application of A-IFRS has increased Australia's foreign investment inflows, in debt and equity.

1.2 Research Motivation

This thesis is motivated by four factors. The first is a study by Zeff (1978), which examines the "*economic consequences*" of accounting reports. He argues that these consequences reflect the shift in the decision-making behaviour of investors and others, following a change in accounting standards. Therefore, to avoid unhealthy economic consequences any such change should first consider the needs of the stakeholders. An example of such an accounting change is the implementation of A-IFRS in the 1st January 2005. It was expected that A-IFRS would affect the decision-making behaviour of foreign investors, by lowering the information asymmetry between local and foreign investors (Commonwealth of Australia, 2002). In essence, the primary objective of this thesis is to examine whether the implementation of A-IFRS did, in fact, realise this objective. The thesis will do this by determining whether there was any increase in foreign investment inflow following this event.

The second motivation is a study by Razin et al. (1998). They argue that foreign investment components are driven by the differing information needs of the foreign investors who invest in them. It is logical to expect that foreign investment components have reacted differently to the application of A-IFRS. In view of this argument, a study

that takes into account all of these components, both debt and equity, will provide a better understanding of how the application of A-IFRS has affected foreign investment.

The third motivation is a number of Australian studies that have examined the effect of the introduction of A-IFRS on the quality of accounting information (e.g., Chua, Cheong, & Gould, 2012; Goodwin, Ahmed, & Heaney, 2008; Jones & Higgins, 2006; Taylor & Richardson, 2014; Taylor & Tower, 2009). These suggest that the high quality and international comparability of A-IFRS may enhance foreign investment decision-making. Yet, despite this consensus about these potential benefits, empirical evidence of increased across-border capital inflow is lacking. Therefore, the present study seeks to fill this gap. In this way, it hopes to provide a better understanding, for regulators, standard-setters and financial-reporting stakeholders, of the application of such regime (i.e. A-IFRS).

The fourth motivation is that previous studies in the literature have analyse the impact of IFRS in a variety of countries, of which the majority are members of EU (e.g., Biddle, Hilary, & Verdi, 2009; De Simone, 2016; Yu & Wahid, 2014). While their findings suggest that the use of global accounting standards does reduce the information disadvantage faced by foreign investors, the authors examine only a short time period, mostly two years, both before and after the application of IFRS (Beneish, Miller, & Yohn, 2015; Gordon, Loeb, & Zhu, 2012; Li, Ng, & Saffar, 2017). Given the global nature of the introduction of IFRS for regulators, standard-setters and financial reporting stakeholders, it is essential to study a long time-series (e.g., Bruggemann, Hitz, & Sellhorn, 2013; Callao, Jarne, & Laínez, 2007; Kvaal & Nobes 2012).

1.3 Theoretical Framework and Research Question

Based on a review of the existing literature, this thesis develops a framework that depicts the effect of A-IFRS application on foreign-investment inflow. Within this structure, a research question is established. The framework is based on the expectation that foreign-investment inflow increased following the application of A-IFRS. This increase is assumed to be due to the reduction in information asymmetry, between local and foreign investors, that results from the high quality and greater comparability of the global standards. Thus, foreign investment providers would have made better investment decisions in terms of allocating their resources to a particular entity and protecting or enhancing their investments (e.g., Armstrong, Barth, Jagolinzer, & Riedl, 2010). In view of this, this thesis establishes the research question as follows:

> ***Are foreign investment inflows to Australia significantly higher following the introduction of A-IFRS?***

To better understand how A-IFRS adoption affects each of the components of foreign investment, differently, the study uses ten components of international investment, both aggregated and disaggregated; these are total foreign investment, total debt and equity, portfolio and direct equity, direct debt, portfolio debt, loans, derivatives, and other debts. These components are explained, in more detail, in Chapter 4.

Previous studies identify the benefits of IFRS. They focus on determining how the quality (e.g., Ashbaugh & Pincus, 2001; Barth, Landsman, & Wayne, 2008; Kim, Tsui, & Yi, 2011), and international comparability of accounting (e.g., Brochet, Jagolinzer, & Riedl, 2013; Chen, Ding, & Xu, 2014) improved under IFRS, thereby enhancing investment decision-making. In contrast, this thesis examines the research question, by

focusing on how the level of each component of foreign investment inflow changed following the implementation of A-IFRS. In this way, the present study provides insight into the economic consequences of A-IFRS, an approach suggested by Dyckman and Zeff (2015, p.520), when they encourage future accounting research to focus on "*economically important results*". This approach is also used by a number of international accounting studies: Armstrong et al. (2010), Beneish et al. (2015), Gordon et al. (2012), and Yu and Wahid (2014).

1.4 Scope of the Study

This thesis examines the effects of A-IFRS application by focusing on a single country, namely, Australia, and its foreign investment inflow. This focus is particularly apt for three main reasons.

Firstly, Kvaal and Nobes (2010) find substantial cross-country variation in IFRS policies, in terms of the choice of year for the application of the standards. In addition, there are other inter-country differences, such as type of institutional setting (e.g., economic, political, or cultural), language, and geographical location (Bruggemann et al., 2013). Therefore, using a single-country approach allows this study to avoid having to control for such differences between countries, and, thereby, increases the validity of the results (e.g., Brochet et al., 2013; Bruggemann et al., 2013; Camfferman & Zeff, 2018).

Secondly, several institutional features make Australia an ideal setting for such a study. Australia, along with New Zealand, was the first country outside the EU to use IFRS. Thus, this thesis will contribute to the existing literature that largely focuses on the EU and the US. Furthermore, pre-IFRS, Australia had already had a longer experience with

such standards, than many other countries. This means that any effect may be detected quickly (Chua et al., 2012). In addition, this thesis assesses information gathered at the national level rather than the firm level. This is because the application of A-IFRS in Australia (and New Zealand), was a national policy, whereby all entities, both listed and non-listed, were required to prepare their financial statements according to A-IFRS. Therefore, using national-level, rather than firm-level, observations will address the research objective and question, and avoid any self-selection problems that occur with firm-level studies (Bruggemann et al., 2013). In addition, Australia has sound governance of local institutions, strong legal enforcement, and a developed open market (see Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998), which means that it is more likely to realise the benefits of A-IFRS (e.g., Daske, Hail, Leuz, & Verdi, 2008; DeFond, Hu, Hung, & Li, 2011; Louis & Urcan, 2014).

Finally, this thesis examines foreign investment inflow, only.[1] Such inflow is vital to a country, like Australia, with huge resources and a relatively small population. An increase of such investment would contribute, significantly, to filling the gap between the country's domestic savings and investment, and so assist in financing local projects, and encouraging further economic benefits. In addition, by examining the inflow, this thesis can control for other economic events that occurred at the same time as the application of A-IFRS. One such major event was the turnaround in the mining sector, which was expected to have affected foreign investment inflow significantly, especially

[1] This thesis does not look at investment outflows from Australia. This is because several of the host countries which Australia invested were non-adopters of IFRS. For instance, the US, Canada, Japan, China, India and South America are major recipients of Australian foreign investment outflows (abs, 2017). However, none of these countries adopted IFRS concurrently with Australia, and, to date some still have not done so.

in direct equity (Minifie, 2013). In fact, according to Connolly and Orsmond (2011), and Kearns and Lowe (2011), the mining boom did cause a substantial increase in investment, with further increases expected. This highlights the fact that the magnitude of the changes observed in Australia's foreign investment inflows could have been due to the commodity-price boom, the effect of which was experienced as increased growth rates, rising interest rates, improved terms of trade, and the appreciation of the Australian dollar to a 30-year high.

Such economic events are controlled for, in the present thesis, using the following variables: real gross domestic product (RGDP), terms of trade (TOT), economic openness (OPEN), real exchange rate (EXCH) and lending rate (INT). These variables, their definitions and the reason for choosing them are described, in detail, in Chapter 6.

1.5 Overview of the Research Method

It is common in the literature to use dummy variables to capture the period of IFRS application; these take a value of 1 for the post-application period, and 0 for the pre-application period.[2] These studies, however, tend to pre-select the date of effect, a method that could be conceptually weak. Each type of foreign investor has a different information need (Razin et al, 1998). This means that each may respond at a different time to the implementation of A-IFRS. Therefore, it is impossible to identify, a priori, when increases in inflows would occur. In such circumstances, using a pre-selected date may result in the statistical significance of the results being overstated (Banerjee, Lumsdaine, & Stock, 1992).

[2] In some cases, even a value (1, 2, 3, 4, 5) commensurate with the degree of implementation (e.g., Othman & Kossentini, 2015; Ramanna & Sletten, 2014).

In this thesis, the structural-break approach, adopted from the macroeconomic literature, is applied to time-series data that covers a 24-year period (1989Q1-2012Q4). Such an approach includes tests that determine the break date endogenously rather than using a pre-selected date. This allows the structural break, if there is one, to be identified by the data, itself – an approach suggested by Dyckman and Zeff (2015) who state that *"Our interest lies not in rejecting the null hypothesis but rather in where we are led by the data to believe the finding of interest is to be found.*" (p. 520). Since the sample period covers 24 years, more than one structural break is anticipated; therefore, the use of the multiple-structural-break test devised by Bai and Perron (2003) is deemed appropriate. Next, to determine if the break date can be associated with A-IFRS, an event window is constructed. This covers the first transition, consolidation and reporting periods, i.e., 2004Q3-2007Q3 (more detail on choosing the window is presented in Chapter 4). This method of identifying the break date, endogenously, is considered the main contribution of the present study.

It is important to note, however, that if any breaks are detected within the specified window, these can only be attributed indirectly to A-IFRS. This is because the structural-break test is a univariate approach, whereby any breaks identified within the A-IFRS-event window could be associated with any of the other contemporaneous, economic events. For example, the increase in capital inflows around 2003-2004 could be due to the commodity-price boom experienced by Australia. Therefore, the Autoregressive Distributed Lag (ARDL) model, developed by Pesaran and Shin (1998), is applied to control for other possible events; in this way, alternative, plausible explanations for increases in inflows can be ruled out. This is done by including in the model a series of macroeconomic variables: RGDP, TOT, OPEN, EXCH, and INT. The

model also allows the long-term effects of A-IFRS to be captured. These effects are not addressed directly by accounting theory. However, a number of studies (e.g., Bruggemann et al., 2013; Callao et al., 2007; Daske et al., 2008) suggest that a country with relatively long experience of international standards and a high level of enforcement could experience greater benefits of IFRS in the long term. Therefore, the use of the structural-break test that determines the date of the break, endogenously, together with the ARDL model, may provide new insights into the association between IFRS and foreign investment. For example, the results of Gordon et al. (2012) showed that the benefits of IFRS are experienced only by countries whose domestic standards (GAAP) differ significantly from IFRS.

1.6 Findings, Implications and Contributions

The foreign investment inflows show evidence of a significant structural break, within the A-IFRS-event window. However, there is a variation in the date of this break: for both portfolio equity and loans, it is within the period of A-IFRS implementation, while portfolio debt shows the break within the transition period; the date is later for the remainder. The only exception is direct equity, the break date for which falls outside the event-window. To add further robustness to the findings, these endogenously-determined structural breaks are then examined using the ARDL bound test. The results confirm a significant association between A-IFRS and foreign investment inflow, in terms both of debt and equity. The only exception is other foreign debt.

These results are consistent with the study's prediction that the application of A-IFRS is associated with increased foreign investment inflows. Thus, they have several important implications. Firstly, they highlight the importance, for accounting literature in general,

and for event studies in particular, of using time series data to determine whether the observed effects are persistent or only short lived. Secondly, they are also important for national accounting regulating bodies, by providing an understanding of the potential, positive consequences of the introduction of IFRS, in terms of their countries' ability to attract increased foreign capital inflow. This may encourage more countries to apply IFRS. Thirdly, a significant increase in foreign direct debt, as indicated by the results, may imply "income-shifting" by Multinational Companies (MNC) (Taylor & Richardson, 2014). This is an unhealthy economic consequence, and, so, has an important implication for both the Australian Taxation Office (ATO) and the Department of Foreign Affairs and Trade (DFAT): they may need to introduce rigorous regulations regarding the use of direct debt by MNC.

This thesis makes a number of important contributions to the existing literature. Firstly, it extends the scope of previous studies that focused, largely, on the EU and the US. Secondly, by using Australia - a country that already had the benefit of high-quality accounting standards prior to its GAAP convergence to A-IFRS this thesis is able to show that such counties can also reap the economic benefits of the application of a global set of standards (e.g., Armstrong et al., 2010; Daske et al., 2008). Moreover, it adds to previous Australian studies by demonstrating that the primary regulatory aim of Australia's implementation of A-IFRS, i.e., to increase its foreign investment inflow, was fulfilled (see Commonwealth of Australia, 2002). In addition, it contributes to the literature that investigates the effect of IFRS application on different types of investment (Ball et al., 2015: Beneish et al., 2015) by confirming that the various components of foreign investment are affected, differently. Moreover, the study investigates a foreign investment variable, namely, foreign derivative, that is not

included in any previous studies. It shows that this component had a significant, positive structural break within the implementation period of AASB 7: *Financial Instruments: Disclosures*. Finally, the study contributes to the existing literature that is based largely on short-term, cross-sectional data (e.g., Akisik & Pfeiffer, 2009; Gordon et al., 2012; Márquez-Ramos, 2011), by using time series data. In this way, it fills a gap that is identified by a number of previous studies (e.g., Bruggemann et al, 2013; Gray, 2014).

In conclusion, these findings suggest that A-IFRS application may, indeed, have played a significant role in increasing foreign investment, particularly that of debt and portfolio equity. Therefore, the findings highlight the fact that, in order to facilitate cross-border investment, it is vital to resolve the differences between national accounting standards. This echoes the pre-application prediction of the Commonwealth of Australia (2002).

1.7 Thesis Structure

The thesis is structured in six chapters, with a general overview provided in this introductory chapter.

Chapter 2 gives a general background to the study, outlining the motivation for IAS/IFRS application, in both Australia and other countries. As the thesis is concerned with Australia's decision to apply IFRS, this chapter also briefly presents the arguments against such application.

Chapter 3 reviews the evidence, from the literature, of the impact of IFRS on foreign investment. It begins by looking at studies that provide theoretical and empirical explanations, from financial and accounting perspectives, for the existence of information disadvantage between local and foreign investors. It then moves on to

examine studies that use a framework to explore the rationale for the relationship between IFRS application and foreign investment in debt and equity. This review identifies gaps in the literature, which this thesis attempts to fill.

Chapter 4 establishes the research framework that illustrates the effect of A-IFRS on foreign investment. This is followed by the development of the key research question, regarding this effect.

Chapter 5 provides a description of the variables, study period, and data. Then, the method and the results of the structural break date test are presented. This is followed by a conclusion.

Chapter 6 explains that in order to provide further evidence that A-IFRS application was the main contributor to the structural break in foreign investment inflow, controls need to be provided for other factors. This is done using the ARDL model. An analytical review of this model, in general, as well as a description of the specific models that are used in this thesis, are presented in this chapter. Then, based on the results of the bound test, the error correction version of the ARDL model is applied. This is followed by a discussion of the results and then a conclusion.

Chapter 7 is the final, overall conclusion, consisting of a summary of the thesis, the implications of the results, the contribution of the research, and its potential limitations. The chapter concludes with suggestions for possible future lines of inquiry.

CHAPTER2: Context and Background

2.1 Introduction

This chapter provides a background to the study, by outlining the motivations for the adoption of International Accounting Standards (IAS) – later renamed the International Financial Accounting Standards (IFRS), from the international and Australian perspectives. As the thesis is concerned with Australia's decision to converge its GAAP with a set of global accounting standards (A-IFRS), this chapter discusses the arguments for and against A-IFRS.[3] The organisation of the chapter is as follows: Sections 2.2 and 2.3 provide a brief overview of IASs/IFRS, and of A-IFRS convergence, respectively. Section 2.4 discusses the potential benefits of this convergence while Section 2.5 focuses on the costs, and Section 2.6 concludes the chapter.

2.2 Introduction of IAS/IFRS

Although the IFRS would appear to be a recent phenomenon, interest in the internationalisation of accounting standards actually began as early as the 1960s, with the establishment of the Accountants' International Study Group (AISG) by the British accounting profession. This body highlighted the need for financial statements to provide comparative information, and for the establishment of a body with the authority to shape international accounting practices, in order to meet the needs of the increasing

[3] Following the example of a number of studies (e.g., Kent & Stewart, 2008; Wang & Welker, 2011), this thesis uses the abbreviation, A-IFRS, to refer to the Australian equivalent of the International Financial Report Standards (IFRS).

internationalisation of capital markets (Zeff, 2012). Nevertheless, the first serious move towards the creation of a global set of standards was made in 1973, with the establishment of the International Accounting Standards Committee (IASC); this was supported by accountancy bodies in nine countries, namely, Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the UK and Ireland (combined), and the US. This body was authorised to shape the international accounting standards (Zeff, 2012). However, its initial focus was on promoting the global aspect of the standards rather than assuring their quality.

In the early 1990s, the G4 group, composed of representatives from the four Anglo-American standard setters, the UK, the US, Canada and Australia, was established to improve the quality of accounting harmonisation.[4] This later became the G4+1 when the IASC joined to keep its members informed of the group's deliberations. The support of the G4 enabled the IASC to become more active in its role as an international standard-setting body (Nobes & Parker, 2010, p.94).

Meanwhile, in the 1990s, there was a strong push for the global integration of capital markets, and the privatisation of public sector entities, resulting in a significant increase in foreign investment flows (Dunstan, 2003). However, under the national accounting systems, companies wishing to enter the foreign capital market had to prepare two sets of accounts, one to meet internal (national) requirements, and another to satisfy external (international) requirements. Such a process was criticised by the EU as being costly for the issuing companies and confusing for the stockholders (EC, 1995). This highlighted the urgency of the need to develop a set of comprehensive core standards that would

[4] Later, New Zealand joined, as the fifth member.

reduce the cost, and increase the comparability of financial reporting, for companies aiming to invest internationally.

The IASC and the International Organisation of Security Commission (IOSCO), therefore, committed to completing, by 1999, a set of International Accounting Standards (IAS) to be used by companies wanting to list their shares, globally. The IOSCO agreed that if these standards were acceptable, it would endorse them for cross-border capital. The US Securities and Exchange Commission (SEC) also agreed to accept the standards, on the condition that they were of sufficiently high quality (Nobes & Parker, 2010, p.94).

In 2001, the IASC relinquished its sole responsibility for standard setting to the IASB, formerly the G4+1. This move was designed to make the standards more reliable, and, therefore, more readily trusted by other countries (Camfferman & Zeff, 2007, p. 498). One year later, the EU issued Regulation 1606/2002, which made the adoption of IAS mandatory for all its member countries by 2005. In its adoption announcement, the EU stressed that "*IAS…will help eliminate barriers to cross-border trading in securities by ensuring that company accounts throughout the EU are more reliable and transparent and that they can be more easily compared. This will in turn increase market efficiency and reduce the cost of raising capital for companies, ultimately improving competitiveness and helping boost growth".* [5]

[5] See; http://europa.eu/rapid/press-release_IP-02-827_en.htm

During the intervening period, the IASB was required to work on these IAS, a task that was completed in 2004. By the time they were adopted, the IAS became the IFRS (EC, 2002).

The EU's decision to adopt IFRS set an example to many other countries, prompting them to follow suit. The decision was also supported by the International Monetary Fund (IMF), the World Bank (WB), and the World Trade Organisation (WTO) (Graham & Neu, 2003; Ramanna & Sletten, 2014).[6]

In 2005, IFRS was fully accepted for use by companies registered on foreign stock exchanges. The only exception was the US, where the SEC still required all foreign-listed companies to prepare their reports according to the US GAAP (Whittington, 2005). However, this changed in 2007, when the SEC allowed all foreign companies to prepare their reports according to either IFRS or the US GAAP (SEC, 2008).

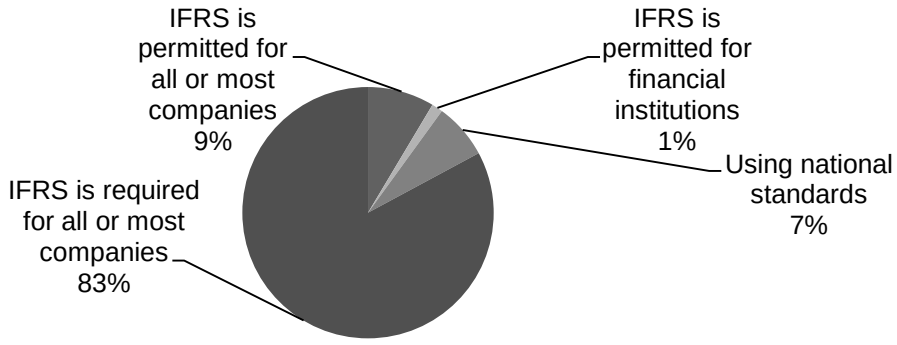
By 2015, IFRS was widely used throughout the world, with over 130 countries either mandating or permitting their use, and with a number of others having convergence agendas (See Figure 2.1). This suggests that even countries such as Australia, with an existing high level of transparency in financial reporting and investor protection, saw the potential benefits of adopting IFRS, central to which was increased foreign capital mobility (e.g., Brochet et al., 2013; Hail, Leuz, & Wysocki, 2010).

Overall, the main motivation for the adoption of IFRS is the need for a common, global business language to assist capital markets that have become internationally integrated.

[6] As a condition for receiving financial aid, the IMF and WB encouraged developing nations to adopt international accounting standards.

Such standards can enhance the information symmetry of financial-reporting information. This increased symmetry should make foreign investors more confident and better informed, when using financial reporting for cross-country investment purposes (Whittington, 2005).

Figure 2. 1: the Statues of IFRS in 140 Countries around the World, 2015



Source: IFRS (2015), www.ifrs.org/use-around-the-world.

2.3 IFRS Convergence by Australia

Australia participates in global relationships through its membership of international organisations, such as the Organisation for Economic Co-operation and Development (OECD), the IOSCO, and the WTO, and through regional organisations, such as the Asia-Pacific Economic Cooperation (APEC) (e.g., Beeson & Capling, 2002; Bell, 1997). These memberships have helped to open the Australian economy to foreign markets and competition. However, in the global era, due to their lack of comparability, Australian national accounting standards (A-GAAP) were unable to meet the needs of

Australian businesses operating in the global capital market. To overcome this lack of comparability, Australia therefore, considered it necessary to implement international accounting standards (Commonwealth of Australia, 2002).

In 1984, the Australian government founded the Accounting Standards Review Board (ASRB) and tasked it with reviewing and approving the accounting standards, with a view to giving the standards legislative backing (Walker, 1987). The board was later re-established under the Australian Securities Commission (ASC) Act of 1989 and given a name change; from 1991, it was known as the Australian Accounting Standards Board (AASB) (e.g., Godfrey, Hodgson, & Holmes, 2003, p. 407).

In 1997, the Corporate Law Economic Reform Program (CLERP proposal No. 1) established the FRC, the key role of which was "*to ensure that the AASC [Australian Accounting Standards Committee] [was] committed to, and [working] towards, adoption of IASC standards having regard to what is taking place in the major capital raising economies"* (Commonwealth of Australia, 1997, p.2). However, to achieve a balance between the quality and comparability requirements, Australia was simply required by the AASB to make its existing standards comply with those issued by the IASC, rather than having to adopt them (e.g., Alfredson, 2002; Collett, Godfrey, & Hrasky, 1998). This resulted in Australia having its own version of IAS. Then, in June 2002, following the decision by the EU to adopt IFRS, the Australian FRC made the decision to adopt the Australian equivalent of IFRS (A-IFRS) on the 1st of January, 2005. The primary aim of these standards was to *"facilitate cross-border comparisons by investors, and enable Australian companies to access international capital markets…"* (Commonwealth of Australia, 2002, p.102). The FRC chairman, Jeff Lucy, summed up the momentous nature of this convergence when he said: *"This is the*

biggest change to accounting standards ever" (Buffini, 2002b cited in Howieson & Langfield-Smith, 2003, p.17).

This decision by the FRC was well received in some influential quarters. Firstly, the Australian government was supportive, because such a decision was consistent with the belief, expressed in its long-standing policy under CLERP No. 9 of 2002, that the implementation of A-IFRS either before or after this time would cause Australia to be out-of-step with the EU, its most significant partner (Commonwealth of Australia, 2002, p.104).[7] Secondly, the implementation of A-IFRS, with the potential to facilitate the flow of foreign investment, also met the requirement of Part 12 of the Australian Securities and Investments Commission (ASIC) Act 2001 and the Australian Stock Exchange (ASX) for a greater international role for the Australian economy (Collett et al., 1998).[8]

2.4 Benefits of A-IFRS

It was claimed that the national accounting standards (A-GAAP) were increasing both the costs for entities aiming to list in foreign capital markets, as they needed to prepare

[7] A major expected benefit of IAS adoption was an increase in foreign investment flows, the result of a reduction in the differences between the reporting systems of the various countries that adopted these standards. However, by 2005, the standards had been adopted by only a few countries (Croatia, Cyprus, Kuwait, Malta, Oman, Pakistan, Latvia, and Trinidad and Tobago), none of which occupied a key position in the global market. This was the main argument against IAS adoption in Australia before 2005 (Collett et al., 2001; McGregor, 1999; Spencer, 1998).

[8] The requirements of Part 12 of ASIC are; *"(i) reducing the cost of capital; and (ii) enabling Australian entities to compete effectively overseas; and (iii) Having accounting standards that are clearly stated and easy to understand; and (c) to maintain investor confidence in the Australian economy (including its capital markets)"* (ASICAct 2001, 2017, p.287).

two sets of financial reports, and the confusion faced by both foreign investors and Australian entities listed in foreign capital markets.[9] To address these issues, the decision was made for Australia to apply A-IFRS (Commonwealth of Australia, 2002). It was expected that these standards would improve the situation by bringing with them a number of benefits:

1. An enhancement in the quality of Australian financial reporting, to a level that is equivalent to that of best international practice;

2. Financial reporting that is globally comparable, as well as lower reporting costs, as a result of companies having to produce one, rather than two, or even more, different sets of financial reports;

3. Lower cost of capital, due to a reduction in the risk related to decision-making by investors (e.g., Camfferman & Zeff, 2007; Collett, Godfrey, & Hrasky, 2001; Commonwealth of Australia, 2002; Hail et al., 2010; Nobes & Parker, 2008; Whittington, 2005).

On the assumption that these benefits are realised, this thesis holds that the major advantage of A-IFRS application is an increase in foreign investment inflows. The roles played by the above benefits, in achieving this key outcome, are discussed below.

To make informed investment decisions, investors need global accounting standards that produce high-quality financial reports. It is expected that A-IFRS, as a single set of accounting principles, would improve both the quantity and quality of disclosure, and,

[9] Under International Investment Position statement (IIP), foreign investment inflows include: 1) Non-residents' investment in domestic projects in the domestic market, and 2) Non-residents' investment in domestic projects in the foreign market.

thereby, provide more relevant and reliable information to boost investor confidence. Researchers have consistently demonstrated that such benefits are more likely to occur in a country where the application of the standards is supported by a strong legal system, backed by a strong enforcement regime (e.g., Cheong, Kim, & Zurbruegg, 2010; Daske et al., 2008; DeFond et al., 2011; Hail et al., 2010; Louis & Urcan, 2014). This clearly describes Australia – a country with common law, and Anglo-Saxon accounting practices that involve an investor orientated approach to accounting standards, both of which are backed by strong regulatory enforcement (Nobes & Parker, 2008; p.32; Porta et al., 1998). Furthermore, Australia is a member of the IASB, with full voting rights, and also of the IOSCO (Alfredson, 2003; Spencer, 1998). Empirical studies such as Cairns, Massoudi, Taplin, and Tarca (2011), Cheong et al. (2010), and Chua et al. (2012) find increases in the relevance and reliability of Australian financial reporting after A-IFRS convergence.

A-IFRS is expected to provide a common method of measuring cash flows, assets, and liabilities. As the number of countries adopting these standards increases, the easier it will be for foreign investors to compare their international investment options. This argument is supported by McGregor who claimed that, under A-IFRS, Australian entities would be able to produce financial reports that are instantly comparable with those of various other countries.[10] He added that there would be a further benefit for Australian entities wanting to list in foreign capital markets, in countries that support IFRS, in that they would no longer have to produce two, or even more, sets of financial

[10] McGregor was an Australian member of the IASB.

reports. Consequently, this would lower the cost of reporting for them (Abenethy, 2002 cited in Gerhardy, 2005).

Collett et al. (2001) extended the above arguments; while agreeing that foreign investment would be encouraged by increasing the comparability of reports, they further argued that this strategy would also reduce the premiums paid by investors to cover the risk associated with not fully understanding financial reports, due to information asymmetry. They concluded that this, in turn would lower the cost of capital and, consequently, provide an added incentive for foreign investors.

From the above discussion, it can be seen that the benefits of A-IFRS, in terms of increased comparability, lower reporting costs, and increased confidence in the quality of financial reports, would lead to better foreign investment decisions.

2.5 Cost of A-IFRS

According to Dunstan (2003), one of the direct expected costs of a change in accounting policy is its negative impact on financial reporting, which is likely to have a knock-on effect on investment decision-making. As mentioned previously, Australia chose to apply a set of equivalent standards that are specific to Australian entities (Nobes, 2008b; Taylor & Tower, 2009; Zeff & Nobes, 2010). These are known as the Australian convergence to the International Financial Reporting Standards (A-IFRS) (Nobes & Zeff, 2016; Morris, Gray, Pickering, & Aisbitt, 2014), and are described as being *"fully converged with IFRS"* (Zeff & Nobes, 2010, p.181). However, despite this, A-IFRS still differed substantially from the existing standards (A-GAAP) in two ways: 1) through "divergence", i.e., when A-IFRS and A-GAAP used different methods to deal with the same issue, and; 2) through "absence", that is, when the A-

IFRS did not cover the same accounting issues as A-GAAP (Ding, Jeanjean, & Stolowy, 2005, p.326).[11] A number of studies have reviewed the quality and the complexity of financial reporting under A-IFRS. Of these, the most controversial and comprehensive, by Haswell and Langfield-Smith (2008), identified "57 serious defects" and criticised, in particular, the Financial Instrument Standards (AASB 132 & 139) and the Intangible Standard (AASB 138). In fact, their claims proved to be correct, with the greatest defect being due to the move to fair value accounting.[12] Australian studies, such as Birt, Rankin, and Song. (2013), Ernst and Young (2005), Jones and Higgins (2006), Jubb (2005), and Taylor and Tower (2009), identified key standards that were expected to affect financial reporting. These included:

1. AASB 138 *Intangible Assets;*
2. AASB 139 *Financial Instruments: Recognition and Measurement;*
3. AASB 132 *Financial Instruments: Presentation and Disclosure*;
4. AASB 7: *Financial Instruments: Disclosures.*

The first of these, AASB 138 *Intangible Assets*, is identified by several studies (e.g., Cheung, Evans, & Wright, 2008; Dunstan, 2003; Jubb, 2005), as the source of the most

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[11] Nobes and Zeff (2016) claim that Australia's process of convergence is the most complex in the world. This is because the AASB presents options for each standard. These include options for*: "(1) changing the designation of standards (e.g., IAS 1 becomes AASB 101); (2) inserting paragraphs relating to not-for-profit entities; (3) adding explanations about the Australian legal context (e.g., clarifying that the fair presentation 'override' in IAS 1 (para. 19) does not apply); and (4) deleting paragraphs on such issues as the scope of application of a standard and which old documents a standard is replacing."* (p. 285).

[12] In terms of IFRS (A-IFRS), most financial instruments assets are recognised at fair value. In terms of financial instrument liabilities, most are recognised at amortised cost, with the exception of derivative and financial instruments held for trading (see Armstrong et al., 2010).

significant changes in financial information. This standard had no prior equivalent in Australia (Godfrey & Koh, 2001). Cheong and Al Masum (2010) state that AASB 138 brought about a fundamental change in the way in which intangible assets are recognised, measured, and treated, in Australia. For instance, the accounting treatment of expensing on investments in intangibles makes accounting earnings (profit) less representative of the real earnings (profit) of an entity. This is because, while the profits of an entity are understated for the year during which large investments have been made in intangibles, in subsequent years, they are overstated, since the economic consequences (i.e. income) that have resulted from the past year's investment will have had no expenses charged against them. The effect of this lasts for a period of time (e.g., Zeghal & Mhedhbi, 2012) and may result in some entities having difficulties paying their existing debt covenants. This, in turn, could push the entities to adjust their financial statements in order to meet the requirements of the debt covenant (Rawlings, 2004). However, in the case of MNCs, of which most have intangible assets, this effect of AASB 138 may encourage managers to take action to shift their company's profits to a country with a low tax rate. This may involve adopting strategies such as transfer pricing of goods and services, borrowing from their affiliates, or using other accounting estimation methods, to reduce their tax (e.g., Ball, Li, & Shivakumar, 2015; De Simone, 2016; Taylor & Tower, 2011). This, in turn, makes their reported earnings unreliable. Hence, the true value of a business is not communicated through its financial statements (e.g., Cheung et al., 2008; Ernst & Young, 2005; Nobes & Schwencke, 2006).

The second standard, AASB 139: *Financial Instruments: Recognition and Measurement*, one of the IASB's newer and more controversial standards, is described as one of the "world's most complicated rules-based standards" (e.g., Armstrong et al.,

2010).[13] Taylor and Tower (2009) maintain that the principal effect of A-IFRS application on Australian financial reporting was due to this standard. For instance, the implementation of AASB 139 resulted in the recognition, by entities, of available-for-sale investments, as well as all derivative financial instruments, both assets and liabilities, at fair value, on the balance sheet. The result of this was: 1) the recognition of unrealised economic gains, such as those from trading securities and other financial instruments; (2) the need to recognise in income statements the transitory losses and gains from the use of fair value, which may have increased the opportunities for managers to manipulate their financial reporting and so reduced the reliability of the information therein.

The third standard, AASB 132 *Financial Instruments: Presentation and Disclosure*, required a greater number of financial instruments to be classified as debt, rather than equity. In conjunction with both the use of fair value and AASB 139, this leads to an increase in the debt-to-equity ratio, largely due to the changes in the derivatives market. Taylor and Tower (2009) argue that increasing this ratio causes thin capitalisation, a situation where the level of debt is much greater than the level of equity capital (Australia Taxation Office, 2005 cited in Taylor, Tower, & Zahn, 2011). This creates two problems: first, exposure to *high credit risk*. If most assets in a company are financed by debt, this, unlike equity, must be repaid. Such a situation may discourage

[13] The complexity of IAS 39 was due to the fact that it contained an excessive number of exceptions, inconsistencies, and other confusing elements, which caused users to struggle to apply it, and, ultimately, to question its authority. Entities reported that they often had to resort to paying hefty fees to consultants for advice. Therefore, a decision was made by the IASB to replace it with IFRS 9. However, replacing such a complex standard was not a straightforward process. According to Hashim, Li, and O'Halloran (2016), this process was completed in 2016, and was due to be made mandatory as of the 1st of January, 2018.

investors, especially debt providers, from financing such a company, which in turn may increase the cost of debt (Mills & Newberry, 2004). Second, *a tax issue*; in Australia, a company is allowed to deduct interest from their income, for tax purposes, when the debt represents 75% or less of assets (Taylor et al., 2011). Thus, increasing the total debt-to-equity ratio can negatively affect the motivation of entities to use debt, in the long term.

The final financial instruments standard, AASB 7: *Financial Instruments: Disclosures*, is the Australian equivalent of IFRS 7 that was issued by the IASB (AASB), in 2005, to replace IAS 32 (AASB 132). This standard required the entities concerned to provide an ample quantity of high-quality disclosure concerning risk and the role of fair value (e.g., Bitr et al., 2013; Chung, Kim, Kim, & Yoo, 2012). The new standard, which came into effect in January 2007, responded to a call from stakeholders for increased transparency, following their experience with the complexity of AASB 139, and the use of derivatives. It did so by requiring increased quantitative and qualitative disclosure of the ways in which managers monitored and controlled the financial risk arising from the use of financial instruments. Hence, it addressed the demands of stakeholders for the kind of information that allowed them to assess an entity's future economic performance, and, so, reduce investment-related risk (Barth & Landsman, 2010). Although financial instrument disclosures are informative for investors, the complexity of AASB 139, together with the additional requirement to disclose risk, under AASB 7, had the potential to make financial reports a complicated communication tool. The main purpose of disclosure regulation is to increase the amount of value-relevant information available to the public, on a timelier basis. However, if the additional information provided lacks quality, such disclosure can potentially add more 'noise', thereby making

it more difficult for investors to assess an entity's true level of profitability and the subsequent risk this entails for them. Put simply, this means that the key information would be lost in the sheer volume of data. It also means that there would be increased compliance costs for entities (e.g., Haswell & Langfield-Smith, 2008).

In addition to the above concerns regarding the change in accounting standards, other researchers argue that the solution to the uncertainty problem faced by foreign investors is too simplistic. They contend that a number of other factors, both exogenous and endogenous, such as culture, the differences from country to country, in terms of their taxation, political and legal systems, level of capital market development, and balance between debt and equity finance, could also contribute to the creation of information inequity between local and foreign investors.[14] Furthermore, they argue that even with the adoption of international standards, these factors will continue to impact accounting practices (e.g., Ball & Shivakumar, 2006; Nobes, 2006; Shima & Yang, 2012; Spencer, 1998).

Moreover, since 2005 continuous changes have had to be made to A-IFRS, mostly because of the ongoing changes to IFRS, made by the IASB. A number of new A-IFRS standards have had to be issued and numerous others revised and reissued.[15] This continual changing and updating of the standards has complicated the convergence process, because there is always a time-lag between the issue of any IASB standard and

[14] Some researchers would prefer to include differences in culture in the above factors; however, Nobes (2006) argues that the cultural factor is already included.

[15] For example, AASB 6 Explorations for and Evaluation of Mineral Resources; AASB7 Financial Instruments: Disclosures; AASB 9 Financial Instruments; AASB 8 Operating Segments; AASB 114 Segment Reporting; AASB 1049 Whole of Government and General Government Sector Financial Reporting; and AASB 101 Presentations of Financial Statements (see the AASB website <http://www.aasb.gov.au> for details).

that of its Australian equivalent. This process of convergence may, therefore, have an ongoing negative impact on the international comparability of A-IFRS reporting (e.g., Chand & Cummings, 2008; Zeff & Nobes, 2010).

From the above discussion, it would appear that it was not appropriate for Australia to move to A-IFRS, as such a change would have had the potential to affect both the quality and comparability of financial reporting. Consequently, A-IFRS application may not have realised its main predicted benefit, that of an increase in foreign investment flows.

On the other hand, Bradbury and Baskerville (2008) reason that Australia (and New Zealand), unlike many other countries that adopted IFRS, already had well-developed accounting standards. Therefore, the Australian motivation for switching to A-IFRS was not to enhance the quality of accounting standards, but, rather, to 'buy into' a globally-accepted process of producing future accounting standards. This is supported by Hail et al. (2010), who claim that the quality of financial reporting is unlikely to have declined as a result of IFRS application. Nobes (2008a) also supports this, adding that *"no plausible alternative to IFRS would be better"* (p. 283). This viewpoint echoes that of CLERP No. 1, which declared that *"[t]here is no benefit in Australia having unique domestic accounting standards which, because of their unfamiliarity, would not be understood by the rest of the world...*" (Commonwealth of Australia, 1997, p. 22). Furthermore, Potter, Ravlic, and Wright (2013) hold that it was inappropriate to argue against the development of accounting standards that would provide useful information for decision making; however, such development comes at a cost. In this regard, Dunstan (2003), referring to the adoption of such standards by New Zealand, concluded

that even though this move would involve short-term costs, these would be outweighed by its long-term, net benefits.

When Jones and Higgins (2006), in 2003, surveyed 60 senior executives from the Top 200 ASX- listed companies about their perceptions of the costs and benefits of A-IFRS application, they found that only 38% of the respondents expected the benefits to exceed the costs. Interestingly, the majority of these indicated that they did not believe that such benefits would stem either from increased access to overseas capital markets or reduced cost of capital. Since this somewhat pessimistic finding would seem to be at odds with the widely held view that A-IFRS adoption could provide significant benefits, both in the short and the long term, it is certainly worth investigating the issue empirically.

2.6 Conclusion

This chapter provided a context for the present study. It began by giving a brief background to the global adoption of IFRS, including a discussion of the anticipated benefits of such an event. The literature voices a general expectation that IFRS adoption would result in reduced information asymmetry between local and foreign investors. This, in turn, was expected to enhance foreign investment mobility, which was the main, long-term goal of IFRS adoption.

The second part of the chapter described the background to Australia's convergence to IFRS. It included a discussion of the fact that, prior to this convergence, accounting standards in Australia were closely aligned with IAS, and that this had been the case since the 1970s. In addition, the application of A-IFRS in 2005 was considered by the Australian government and its standard setters to be the optimal way to support

Australian business and to improve its capacity to compete internationally. Furthermore, the chapter provided a discussion of the expected benefits of A-IFRS, that is, the improved quality and increased global comparability of financial statements, the reduced cost of capital due to a reduction in the risk related to decision making, and, ultimately, the removal of barriers to foreign investment mobility. Finally, it outlined the expected costs those to be borne if the above key benefits of A-IFRS were not realised. This outcome was likely, because the already high quality of Australia's accounting standards prior to the convergence would be negatively impacted by the use of the new standards, especially under AASB 132, 138, 139, and 7, which are connected with the use of fair value.

This thesis does not attempt to investigate, directly, the positive and negative effects of each standard on foreign investment decision-making; neither does it try to argue that A-IFRS is better than A-GAAP. Rather, what it does seek to investigate empirically is whether Australia's convergence to IFRS increased foreign investment inflows. The investigation is based on the argument that A-IFRS-based financial statements contain more information than those prepared under A-GAAP. This is corroborated by the assertion in the literature that the use of a uniform system of accounting results in reduced information asymmetry between local and foreign investors, which is a key determinant of foreign investors' financing decisions. By controlling for macroeconomic conditions (RGDP, TOT, OPEN, EXCH, INT, and other financial crisis), the study is able to analyse any identified increases in foreign investment inflows (debt and equity) and present the findings as evidence that A-IFRS did attract increased foreign investment.

The next chapter reviews the evidence from both the international and Australian perspectives of the effects of the application of IFRS/A-IFRS on capital markets, including foreign investment.

CHAPTER 3: Literature Review

3.1 Introduction

Investors aim to invest abroad, because doing so involves higher returns and/or lower risk. However, these benefits are associated with certain costs, incurred as a result of the information asymmetry between these foreign investors and their local counterparts (Young & Guenther, 2003). Such information asymmetry arises from the differences in accounting systems from country to country, and results in foreign investor uncertainty about the quality of the accounting information (Beneish & Yohn 2008). As a result, foreign investors are forced to pay high costs to have this information processed into a recognisable format. Such asymmetry could be reduced by the adoption of a uniform set of global accounting standards, that is, IFRS (Beneish & Yohn 2008). However, investors are not equal in terms of their objectives, needs, or even their roles in the entities, and, therefore, may react differently to any such reduction in information asymmetry (e.g., Goldstein & Razin, 2006; Razin et al., 1998). Consequently, in this thesis, which seeks to understand the effect of IFRS on foreign investment, care has been taken to distinguish between the different types of investor.

Consistent with the objective of the thesis, this chapter reviews studies that have demonstrated a link between IFRS and foreign investment. These studies are divided into two groups: in Section 2, the theoretical and empirical studies that highlight the important role of information in foreign investment are reviewed, while Section 3 considers those that examine the effect of IFRS on foreign investment. The latter are divided into three groups on the basis of the particular foreign investment aggregate they explored: i) portfolio equity; ii) direct equity; and iii) debts. Each group is

reviewed in turn. This section ends with a review of other relevant capital market studies. Finally, Section 4 identifies any gaps in the existing research, before providing a conclusion to the chapter.

3.2 Foreign Investment

There is a considerable body of theoretical and empirical evidence to suggest that information asymmetry between local and foreign investors, impairs foreign investment mobility. For example, a theoretical, macro-level model of this asymmetry, which was developed by Gordon and Bovenberg (1996), presents a compelling explanation of the home bias in international capital markets. The fundamental assumption underlying this model is that, because of the information disadvantage, foreign investors face what is known as the "lemons problem".[16] In situations in which investors face information asymmetry in foreign capital markets, they are unable to observe the future cash flow of their investments. Therefore, they are prepared to pay no more than an average price for such equity. This favours low-value firms ('lemons') that wish to sell equity at an average value. Hence, foreign investors become increasingly reluctant to engage in cross-border investment. This phenomenon implies that foreign-investment decisions are driven more by information asymmetry than by price. In support of this, Australian equity home bias is empirically investigated by Mishra (2008), using the 2001-2005 dataset of the IMF. It is revealed that Australian foreign equity is largely determined by

[16] The concept of the 'lemon problem' was first introduced by Akerlof (1970). According to him, the information asymmetry between the consumer and the payer causes an adverse-selection problem, because consumers, having no information about the quality of a product, are, therefore, only willing to pay an average price. Because of this, it is more likely that poor-quality products (i.e.'lemons') will be offered for sale rather than good-quality products.

foreign firms listing their shares on the domestic market. This is because the lower cost of information for local investors makes such foreign firms more accessible to them. Such a finding supports those of earlier studies by Kang and Stulz (1997) and Jiang and Kim (2004), who show that Japanese firms with high information asymmetry have low international ownership (by non-Japanese investors), and vice versa. In both studies, the conclusion is that because international ownership is sensitive to information asymmetry, it is chiefly attracted to information-rich firms, that is, those with a strong history of accounting performance. Similarly, Ahearne, Griever and Warnock (2004) identify the differences between countries in terms of accounting information, as the key factor influencing the bias in equity holdings in the US.

To investigate the effect of transaction costs on foreign investment, Martin and Rey (2004) devise a comprehensive framework that models international trade in assets. This is based on their belief that "imperfect substitution of assets", in conjunction with increased transaction costs, affects the price of assets, and, consequently, the level of demand for them. Using this model, they analyse the effect of transaction costs on asset trade, in a two-country study. Their findings show that the cost of transactions reflects the information asymmetry between foreign and domestic investors and results in low asset prices (equity), thereby causing demand for foreign assets to fall. This relationship is empirically investigated by Thapa and Poshakwale (2010). They identify the significant effect of transaction costs (i.e., those arising from commissions, fees, and market impact) on foreign-equity portfolio investment, in 36 countries. Their findings suggest that, if policy-makers were to lower transaction costs, these countries could expect to attract more foreign equity portfolio investment.

Other studies provide theoretical and empirical explanations of how information asymmetry might affect foreign investors, differently. Their premise is that investors are not equal in terms of their objectives, needs, or even their roles in the entities. They argue that because of this, it is important for studies to distinguish between the various types of investor. For example, as foreign direct investors own 10% or more of a firm's shares, they are able to completely circumvent informational problems, since such ownership gives them access to private information concerning that company's true productivity. Meanwhile, investors in portfolio debt and equity, who own less than 10% of the shares, have no such privileged access and are, therefore, informationally disadvantaged. Given this situation, foreign direct investment is the preferred method of financing, followed by debt and then portfolio equity (Razin et al., 1998). In support of this, Goldstein and Razin (2006) find that the high degree of information transparency in developed economies reduces information asymmetry, thereby making portfolio investment more attractive to investors, than direct investment.

Another comprehensive study of this topic is conducted by Daude and Fratzscher (2008), using bilateral capital stocks from 77 countries, including Australia. They examine four general categories of institutional investors: those in foreign direct investment, portfolio equity, portfolio debt, and loans. Unlike Goldstein and Razin (2006), they find that information asymmetry has a substantially greater effect on foreign direct investment and loans, than on portfolio investment. However, in contrast to direct investment, portfolio investment is found to be sensitive to the quality of a country's institutional factors. This study is relevant to the present thesis, in that both consider more than one disaggregated foreign investment. In addition, both use information asymmetry to explain changes in foreign investment inflow. However, the

present study uses more disaggregated components of foreign investment than have been used to date in the literature, and it also seeks to establish a link between changes in foreign investment inflows and the convergence of Australian standards to A-IFRS.

With a focus on the debt market, a recent study by Abad, Sánchez-Ballesta, and Yagüe (2017) investigates the relationship between information asymmetry and debt-investment decisions in Spanish-listed, non- financial firms. They find that information asymmetry leads to a shorter debt-maturity and greater difficulty for firms, in accessing both public and bank debt. To overcome such limitations, these firms turn to trade credit as an alternative source of short-term finance. It is important to mention that the study does not distinguish between local and foreign investment. The effect of social trust as a measure of information asymmetry on the financial decision is studied by Levine, Lin, and Xie (2016). Analysing data from 34 countries for the period 1990–2011, they find that, during financial crises, liquidity-dependent firms in high-trust economies succeed in obtaining more trade credit than those in low-trust economies. They conclude, therefore, that the greater degree of social trust that exists during times of financial crisis facilitates access to informal finance.

In conclusion, theoretical and empirical financial studies show that investment mobility across borders is affected by information asymmetry and, perhaps more importantly, by the accounting differences between countries. In addition, they indicate that this effect varies according to the type of investment.

The following section reviews studies that have demonstrated a link between the introduction of IFRS and changes in foreign investment.

3.3 IFRS and Foreign Investment

Accounting information is critical for foreign investment decision making. It is not surprising, therefore, that economies that do not have in place a financial reporting system that can provide potential investors with relevant, reliable, and comparable information are experiencing considerable difficulty in attracting foreign investment (Akisik & Pfeiffer, 2009). In addition, as there is a great deal of variation in accounting standards and disclosure requirements, from country to country, foreign investors are aware of being informationally disadvantaged compared to local investors. A single accounting regime such as IFRS is expected to reduce such differences in accounting standards, increase the comparability of accounting information, enhance investors' understanding of international financial reporting, and thereby increase investor confidence in investing abroad. This section examines the arguments in previous literature that explore the links between IFRS and foreign investment by considering three main types of investment: 1) portfolio equity; 2) direct equity; and 3) debt. Each type is reviewed in turn.

3.3.1 Foreign Portfolio Equity

Portfolio equity, unlike other types of investment, provides a direct way of accessing capital markets, and, therefore, is a source of both liquidity and flexibility. The result is a reduction in the cost of capital (IMF, 2009). However, it has been said that investors in portfolio equity face more information asymmetry than those in other types of investment. This is because their ownership of less than 10% of an entity's shares means that they have, at best, only a limited role in the entity's decision-making and no right to access insider information (e.g., Razin et al., 1998). Therefore, the reduction in

asymmetry under IFRS due to their demands for increased disclosure, improved accounting and auditing standards, and use of international auditors is expected to enable foreign portfolio equity providers to manage their projects more efficiently and, ultimately, to grow their investments (Choi, Lam, Sami, & Zhou, 2013).

A substantial number of studies have examined the role played by accounting systems in attracting foreign portfolio equity. Choi and Levich (1991) use a survey to investigate the effects that the differences between national accounting systems had on the market decisions made by foreign investors in Germany, Japan, Switzerland, the UK and the US. As they believe that such differences have a greater effect on equity than debt, they focus more on equity investments than bonds. Roughly half of the participants surveyed in the study, felt that differences between international accounting standards influenced their market decisions. They also agree that the asymmetry created by such differences, might affect the pricing of securities and the composition of foreign portfolios.

Salter (1998) investigates the effect of corporate financial disclosure made in accordance with the international financial reporting index (IFRI), on foreign investment. The key questions raised in this study are, firstly, whether firms in developed countries have levels of disclosure that differ from those in emerging countries, and secondly, if so, what effect these differences have on foreign investment inflows. Using comprehensive data for the years 1991, 1993, and 1995, obtained from the Centre for International Financial Analysis and Research (CIFAR), and disclosure indices for industrial firms in 33 of the world's emerging and developed markets, the author finds that the disclosure by firms in the former type of market is greater than that

by firms in the latter. Salter (1998) concludes that increased disclosure may be regarded as an effective tool for a country to use, to attract more foreign portfolio investment.

The adoption of IAS (or the US-GAAP, in the case of non-US entities) is studied by Ashbaugh (2001), using non-US firms listed on the London Stock Exchange (LSX). The results reveal that such companies attracted greater foreign equity, because they could provide more standardised information. It is also found that companies that adopt IAS, trade in more foreign equity markets, issue more equity, and provide more standardised information than companies that use only their domestic reporting systems.

In a similar vein, the association between home bias and the choice of accounting methods of US investors that invest in non-US companies is investigated by Bradshaw, Bushee, and Miller (2004). They suggest that this association is driven by two factors: firstly, the degree to which the information that these investors access is familiar to them; and secondly, the use of the US GAAP as their preferred accounting system. Accordingly, the assumption is that US investors will demonstrate a preference for firms using accounting rules that are similar to those of the US GAAP, as these are more likely to produce information in a familiar format, which they can interpret easily, as a basis for decision-making. To test this, data from a cross-sectional sample of firms from 13 countries are examined. The finding is a significant one: when conformity is high, US investment is also high. This result fits with the frameworks devised by Gordon and Bovenberg (1996) and Martin and Rey (2004), and suggests that the degree to which accounting practices are standardised is a crucial factor in investors' decisions to invest in foreign companies.

The notion that the voluntary adoption of IAS attracts more foreign investment is also examined by Covrig, Defond, and Hung (2007). The authors study mutual funds from 29 countries for the period 1999–2002. These are measured using two methods: the first is to establish the total number of shares owned by the mutual funds, which is then divided by the total number of shares outstanding; the second is using the natural logarithm of the number of mutual funds invested in the company. Both methods establish that switching to IAS significantly affects the level of foreign mutual fund ownership because of the better quality of information provided by such standards. In this way, home bias by foreign investors is mitigated and cross-border foreign capital mobility is facilitated. This is supported by the findings of Biscarri and Espinosa (2008), which suggest that a uniform set of global accounting standards is vital dimension of financial integration and, furthermore, that such integration would lead to more precise pricing of foreign assets and, ultimately, to improved efficiency in the allocation of foreign funds.

Another study, by Yu and Wahid (2014), examines mutual funds companies in 28 IFRS- and non-IRFS-adopting countries for the period 2000–2007. They find that after companies adopt IFRS, they experience a significant increase in foreign mutual funds. The authors suggest that the harmonisation of accounting reporting between countries plays a more important role in attracting foreign investment than does the improvement of domestic accounting systems. They further suggest that IFRS adoption leads to improved comparability of financial information, thereby, reducing the information processing costs paid by foreign investors. This, in turn, increases cross-border holdings, even in countries with weak investor protection. Consistent with this notion, DeFond et al. (2011) finds that foreign mutual-fund ownership increases when

comparability of information is improved by mandatory IFRS adoption. The study by Yu and Wahid (2014) and the present study both use a direct measurement method to estimate the effect of IFRS, that is, the change in foreign investment post-adoption. However, in the present study, the extent of this change is established by measuring the level of foreign investment, rather than using a ratio. Furthermore, this thesis focuses on a single country and uses the time series data of a number of different components of foreign investment.

At the macroeconomic level, Amiram (2012) postulates that switching to IFRS would enable countries to attract more foreign portfolio equity, as, with a common set of global accounting rules, investors would be able to make decisions more easily. The study uses a gravity model based on cross-sectional data for 2000–2006 from 73 countries, which were obtained from the Coordinated Portfolio Investment Survey (CPIS), conducted by the IMF. The findings confirm that a positive relationship does, in fact, exist between IFRS adoption and foreign investment, and that it is stronger when a group of countries share a common language, culture, and legal system. This supports the study's hypothesis, that the use of a uniform, global accounting system enables a country to attract more foreign investment.

In the US, Akisik and Pfeiffer (2009) investigate the trade-off between direct investment and portfolio investment (debt and equity) in foreign, developed and developing countries by US investors. They focus, particularly on the role played in this by accounting quality and corporate governance. Using IFRS and the US-GAAP as measures of the quality of financial reporting, they find that there is a strong positive relationship between portfolio investment and the quality of accounting standards, measured as a dummy variable for both IFRS and the US-GAAP. Moreover, this

correlation is more significant in countries with a strong level of enforcement. Similar to Akisik and Pfeiffer (2009), Shima and Gordon (2011) build their hypothesis on the assumption that, *"IFRS is considered an internationally accepted accounting standard, comparable to US GAAP [and]…[w]hile some differences exist between the two, US investors would likely find IFRS statements more familiar than ones prepared under a country's prior, home GAAP"*(p. 482). They use data from 44 countries for the period 2003–2006 and measure the adoption of IFRS as a dummy variable equal either to 1 or to 0. Like those of Akisik and Pfeiffer (2009), their findings suggest that IFRS adoption by a country with a strong level of enforcement attracts US portfolio equity to that country.

Overall, the above studies provide evidence that IAS/IFRS has an effect on foreign portfolio equity, due to the enhanced information environment that is created by the increased disclosure and improved comparability under such standards. However, this effect is associated only with countries that have a strong level of enforcement.

3.3.2 Foreign Direct Equity

Foreign direct equity arises when foreign investors own 10% or more of a local entity's shares. In this way, they gain control of, or, at the very least, a significant level of influence over, management decisions (IMF, 2009, paragraph 6.9). In view of this, such investors, therefore, behave differently from those in other forms of investment (IMF, 2009, paragraph 6.10). For example, they have the right to obtain insider information, so their investment is less affected by information asymmetry than other components of foreign investment. Therefore, when there is an issue with information asymmetry in the host country, direct investment is undertaken so that an entity's business activities

may be monitored more closely (e.g., Muniandy, 2016; Razin et al., 1998). In view of this, it is expected that IFRS would have a negative or nil effect on foreign direct investment. This hypothesis is investigated by a number of studies. The study by DeFond, Gao, Li, and Xia (2014), examines the effect of IFRS adoption by China, on its foreign investment. The study uses panel data for the pre-adoption years (2005 and 2006) and the post-adoption years (2007 and 2008). Three firm-level measures are used to gauge foreign investment: (1) a binary variable, indicating whether or not foreign firms hold stock in locally listed firms; (2) the number of foreign firms holding stock in the firm; and (3) the percentage of the firm's shares that are owned by foreign firms. It was found that, after IFRS adoption, there is a drop in foreign institutional investment, especially among certain Chinese firms that have more opportunities to take unfair advantage of the fair-value provisions under IFRS, by manipulating them to increase their profits.

Another study, by Louis and Urcan (2014), examines whether a country's adoption of IFRS increases its cross-border acquisitions and, if so, whether this increase is driven simply by the adoption itself, or rather by the way in which it is enforced. They conclude that IFRS adoption does lead to an increase in foreign investment inflow, thus benefiting adopting countries. The results also suggest that the effect of IFRS is likely driven more by the use of a common reporting system than by the improvement in the quality of reporting of individual firms. However, they also found that this result is more significant in countries where the adoption of IFRS is voluntary.

The role of IFRS adoption in Europe, from a macroeconomic perspective, is explored by Márquez-Ramos (2011), who focusing on the impact on international trade and foreign direct investment. Using 12-years' worth of data, she demonstrates that there is

a positive relationship between accounting harmonisation and foreign investment. The results also show that, since 2002, there has been an increase in both trade in goods and FDI inflows in adopting countries. A similar result is found by Chen et al. (2014) in their study of 30 OECD countries for 2001– 2005.

An earlier study was conducted by Young and Guenther (2003). Although not directly related to IFRS, it examines the relationship between foreign direct investment and financial reporting environments. The authors argue that the biggest potential barrier to foreign capital mobility is the asymmetric information environment resulting from the country-to-country variations in accounting standards, regulatory environments, and disclosure requirements. The study is based on the assumption that when accounting disclosure is of high quality, foreign capital mobility in turn, is high. A number of methods are employed in the study, to measure a country's level of foreign capital mobility: one is based on a consumption-based empirical framework, and another is an international CAPM-based approach. The latter method uses the link between direct investment inflows and the opportunity for the country to attract foreign investment. The study finds that, of the 23 countries investigated, those who make more disclosures attract a higher level of foreign direct investment, especially those of which the rules for financial reporting are not aligned with those for tax accounting. Thus, it is evident that the tax accounting rules are more important for foreign investment than the level of disclosure itself.

The interaction between IFRS, corporate governance, and foreign direct investment inflows is examined by Farooque and Yarram (2010). Using the 2004 data from a large sample of countries, as well as a number of control variables, such as accounting disclosure, property rights, and openness of markets, they conclude that IFRS adoption

has a significant impact on corporate governance, but not on foreign direct investment However, they believe that, once the quality of governance has been improved, the adoption of IFRS then allows greater mobility of capital across borders. Farooque and Yarram (2013) extend the above study by focusing on the period 1996–2007. As with their earlier study, a positive association between FDI and governance is again established. In addition, while governance is found to be affected by IFRS, there is no evidence of a direct link between FDI and IFRS. The conclusion of the study stresses the importance of improving governance at the macro level. Akisik and Pfeiffer (2009), also, find no effect of adopting US-GAAP or IFRS on US direct investment in foreign entities. Gordon et al. (2012) study 124 countries, for the period 1996–2009 and find that foreign direct investment does increase when IFRS is adopted, but only in cases in which the adopting country is a developing one and there is a considerable difference between its GAAP and the newly-adopted standards. As in the present thesis, Gordon et al. (2012) consider IFRS adoption as an event, in order to estimate its effect on foreign direct investment. Similar to the present study, they undertake a univariate comparison of the periods before and after adoption; however, this is done for both developing and developed countries, rather than for a single country.

Similar to Gordon et al. (2012), Efobi, Nnadi, Odebiyi, and Beecroft (2014) investigate whether adopting IFRS results in firms attracting increased foreign direct investment; however, this study is conducted within an African institutional framework. The authors claim that African countries generally suffer from institutional corruption; therefore, given this poor institutional quality, the question they attempt to answer is what effect IFRS adoption has on foreign direct investment in such countries. Forty-Two African countries are studied for the period 2001–2012. Two estimation methods are applied:

the feasible generalised least square technique and the general method in the moment system. The outcomes indicate that the benefits of adopting IFRS, for African countries that have a developed institutional framework compared to those possessing a static one is an improvement of over 200% in foreign direct investment flow.

A different approach is used by Ramanna and Sletten (2014) to examine the network benefits of IFRS adoption from a network theory perspective. Their study raises the important question of why countries voluntarily adopt IFRS. They hypothesise that *"perceived network benefits from the extant worldwide adoption of IFRS can explain part of countries' shift away from local accounting standards*" (p. 1517). This means that as the number of adopting countries increases, so too does foreign investment. This increase in FDI is believed to be facilitated by the ability of IFRS to reduce information asymmetry between local and foreign investors, as both use IFRS. The study uses a sample of 92 countries (including Australia) for the period 2003–2008. As in the present study, the benefits of IFRS are measured by identifying changes in foreign direct investment, foreign equity portfolio investment, and foreign trade; however, because of a lack of data, only foreign trade is used. Moreover, a dummy variable is used to identify the window of IFRS adoption, taking a value of 1 for countries that adopted IFRS in 2003, and 2 for countries that adopted IFRS in 2004, and so on. The results are consistent with the hypothesis. The results also suggest that the benefits of adopting the new standards can be realised even in a country in which high-quality accountant standards were in operation, prior to IFRS adoption.

Overall, unlike the results for portfolio equity, the evidence of an association between IFRS adoption and increased direct investment is mixed. The findings are often found to apply to developing countries rather than developed countries, and, then, only when

there is a considerable difference between their local accounting standards and IFRS. Moreover, while the level of national institutional enforcement plays a key role in attracting portfolio equity, under IFRS, it has less effect on direct equity. Finally, it is found that taxation can play an important role in attracting direct investment. Countries, in which rules for financial accounting are not aligned with those for tax accounting succeed in attracting more foreign direct investment than those in which there is alignment of such rules. This seems to indicate a relationship between the tax rate in the host country and the amount of direct investment it attracts, a finding that could have serious implications for Australia, a country with one of the highest tax rates in the world. It is important to mention here that in some resource-rich' countries, such as Australia, where foreign direct investment is supposed to be attracted, there is a high level of restrictions affecting the level of such investment in an attempt to protect the country's natural resources, especially those exploited by the mining sector. Golub, Hajkova, Mirza, Nicoletti, and Yoo (2003) estimate that Australia could attract approximately 45% more foreign direct investment than it does, by lowering foreign direct investment restrictions to the same level as those of the UK. Yet, this situation persists, despite the fact that Australia was ranked 14th in the world, between 1996 and 2005 in terms of being the most attractive investment destination (OECD, 2006, p. 21). These factors also need to be considered in interpreted the results.

3.3.3 Foreign Debts

Debt and equity differ in the type of liability and risk associated with them. While equity gives the investor a claim on an entity's assets, debt involves the entity having to pay back the principal and/or interest, usually according to a predetermined formula. This system of debt repayment is designed to limit the creditor's exposure to risk.

However, as in equity, where the entity's performance is important for debt obligation, it is also largely dependent on other variables such as the interest rate and risk level (IMF, 2009, paragraph 5.32). Therefore, IFRS adoption may affect equity and debt differently.

According to the IMF (2009), foreign debt can be classified into five components: direct debt, portfolio debt, loans, derivatives, and other debt. The literature related to each of these is reviewed below.

3.3.3.1 Foreign Direct Debt

The term 'foreign direct debt' refers to lending and borrowing transactions between overseas, non-financial affiliates and, as such, it can be used by those who invest in it to access insider information (IMF, 2009).[17] It may also be used to gain an advantage, such as a taxation benefit (Avdjiev, Chui, & Shin, 2014). For these reasons, foreign direct debt may react differently from other debt components to IFRS adoption.

According to Kayis-Kumar (2015), the differences in tax rates across borders *"incentivises multinational enterprises (MNEs) to finance their high-tax jurisdiction affiliates with excessive debt, thereby reducing their tax liability in those jurisdictions"* (p.301). This strategy is called income-shifting, and it creates what is called 'thin capitalisation', a phenomenon that occurs when a company uses more debt than equity to finance its assets as a way of reducing its income tax, since it can then claim the interest payments as a tax deduction. The first study to investigate how such thin capitalisation is affected by IFRS adoption is that of Taylor and Tower (2009). They

[17] In financial corporations, all debt contracts between affiliates are considered to be portfolio or other investments. (IMF, 2009, p.105)

argue that using fair value as a measure of financial assets and liabilities involves significant assumptions by management. The result, therefore, is inherent uncertainty about the true value of assets, liabilities and equity, which, in turn, may affect the company's thin-capitalisation position. Using a sample of 105 listed companies, the researchers find that "*although the introduction of [A-IFRS] had a significant impact on the thin capitalisation position of Australian listed firms, there [was] only one company within the sample set of 105 that potentially [did] not comply with those provisions, as a direct result of [A-IFRS] adoption"* (p.50).

Another study, by Taylor et al. (2011), investigates the relationship between the amount of financial instrument disclosure made by a company and its international tax characteristics, using a sample of Australian publicly listed resource companies, of which most are MNC for the period 2003–2006. The authors argue that A-IFRS has the potential to affect a firm's thin capitalisation. This is because, if such a firm is operating globally as part of an international group of corporations, there is a greater incentive for it to use direct debt to shift its profits from a country with a high tax-rate, such as Australia, to one where the tax-rate is lower, such as the US. Therefore, the researchers predict that the prospect of receiving tax benefits by income-shifting may encourage managers to reduce the amount of information disclosure they make regarding their financing arrangements and associated financial instruments. These findings confirm the prediction, and raise an important concern about the link between international tax structures and disclosure patterns. In their 2013 study, Richardson, Taylor, and Lanis examine the determinants of the thinly-capitalised structures of 203 publicly listed Australian firms for the 2006–2009 period (the equivalent of 812 firm-years). It was during this time that Australia started to use A-IFRS. The results indicate that a firm's

thin-capitalisation position is significantly associated with its multi-national status, use of tax-havens, withholding of taxes, and tax uncertainty. Of these factors, the first two have the strongest association with thin capitalisation. This is further supported by Taylor and Richardson (2014).

At an international level, De Simone (2016) investigates whether the adoption of IFRS by affiliates of MNC facilitates tax-motivated income-shifting. The author assumes that this income-shifting is undertaken either by: (i) a company's use of a 'flexible' method of estimating profits, so as to give it the appearance of having achieved a lower bottom-line in the high-tax country; or (ii) using a transfer-pricing method for goods and services, and internal debt (FDD) between the affiliates, in order to shift profits to a low-tax country. Under IFRS, increased comparability and disclosure, in conjunction with more stringent auditing of transfer-pricing and adjustment, should, in fact, reduce the opportunity for a company to use either of these methods (e.g., Ernst & Young, 2005; Taylor & Tower, 2011). However, the findings of De Simone (2016) provide significant evidence that IFRS adoption by affiliates does facilitate tax-motivated changes in reported pre-tax profits. Nevertheless, De Simone does note that such changes are only possible for a couple of years after IFRS adoption. Consequently, if the increase in income-shifting stems mainly from using FDD, as the only legal way for MNCs to shift their profits, the increase should be considered the result of increased information transparency. This could also explain why such an effect occurred with a lag at the time of mandatory IFRS adoption, as, from that point, all companies would have had to present their financial positions according to IFRS. In support of this, Márquez-Ramos (2011) identifies a significant increase in direct debt, following IFRS adoption by the EU countries, which may be associated with a decrease in information

asymmetry. She concludes that *"the adoption of a high-quality set of harmonised accounting standards fosters trade and [attracts] FDI, as the improvement in accounting information, in turn, fosters financial transparency and comparability, and reduces information asymmetries and unfamiliarity among agents in different countries." (p. 56).*

3.3.3.2 Foreign Portfolio Debt and Loan

Portfolio investment is usually defined as "*cross border transactions and positions involving debt… other than those included in direct investment…"* and consists of bonds and money-market instruments (IMF, 2009, paragraph 6.54). Loans, on the other hand are *"financial assets that (a) are created when a creditor lends funds directly to a debtor, and (b) are evidenced by documents that are not negotiable"* (IMF, 2009, paragraph 5.51). Like portfolio investment, it, too, is classified according to the length of time it takes to mature, that is, as a short- or long-term loan.[18]

In a more recent study, Florou and Kosi (2015) investigate the association between the adoption of IFRS and borrowing decisions involving both bonds and loans. They predict that IFRS adopters are more likely to access public bonds, rather than private loans and so experience a decrease in bond-yield spread. The reason is the higher quality and greater comparability of their financial reporting. However, if IAS 39-*Financial Instruments: Recognition and Measurement* implementation, in conjunction with the introduction of fair-value use, affects the reliability of financial reporting under

[18] Under AASB 139 (IAS 39), the ways in which portfolio debt and loans are valuated are different: portfolio debt is measured using fair value while loans are measured using the amortising value (Armstrong et al., 2010; Taylor et al., 2009).

IFRS, the outcome could be negative. They use samples from 16 countries, including Australia, for the period 2002–2007. The results are significant, supporting the notion that IFRS adoption increases the quality of financial reports and, therefore, the reliability of the accounting information contained within them. Consistent with the findings of previous research concerning portfolio equity, these results apply only to countries with a relatively more developed enforcement mechanism, tighter control of corruption, and lower financial risk. Furthermore, the findings suggest that adoption of IFRS increases a firm's value by reducing the cost of public debt. This is consistent with the results of Bharath, Sunder, and Sunder (2008), that firms with poor-quality accounting systems tend to borrow from private rather than public markets. They also find that there is an association between the poor quality of an accounting system and an increase in the cost of capital debt, which is more significant for bonds than loans.

Kim et al. (2011) also investigate the effect of IFRS on the information asymmetry between lenders and borrowers. They study the association between the voluntary adoption of IFRS and loan contracting, focusing on non-US borrowers from 40 countries for the period 1997–2005. They find that IFRS adopters are charged lower loan rates than non-adopters. In addition, the former are more often offered non-price terms such as loan size and collateralisation by banks than are the latter. Also, IFRS adopters are more attractive to foreign lenders than non-adopters. The conclusion is that IFRS adoption results in increased disclosure by borrowers, thereby allowing lenders to more accurately estimate the quality of credit. This leads to increased debtor participation in foreign loan markets. This finding is further support by Brown (2014), Chan, Hsu, and Lee, (2013), and Chen, Chin, Wang, and Yao (2015).

Ball et al. (2015) arrive at a different result to Florou and Kosi (2015). They study the effect of IFRS information on debt markets in bonds and loans in a number of countries, including Australia. They focus on the change in debt-contracting around the date of IFRS adoption, especially under the application of IAS 39: *Financial Instruments: Recognition and Measurement*. They argue that the gains and losses, resulting from the use of fair value and re-recognition of some financial instrument elements, under this standard may make the information in financial reports less reliable for debt contracting. In this case, IFRS adopters would be more likely to use private loans than to access public bonds. Moreover, the option under IFRS to use fair value to evaluate certain financial liabilities makes it less useful in debt contracting. This is because debt contracts stipulate that principal and interest must be repaid, rather than the fair value of the debt. Furthermore, using fair value may provide managers with more opportunities to manipulate their firms' financial reporting. The authors assume that there will be less need for future renegotiation if the regulatory changes resulting from IFRS introduction improve reporting quality and, thus, reduce information asymmetry before the loan is contracted. This, in turn, will reduce the demand for debt covenants both accounting and non-accounting. The findings show that while there is an increase in the number of accounting covenants for bonds, loans show different results, with a decrease in the number of accounting covenants, and, conversely, an increase in non-accounting covenants. The suggestion is that the increased use of fair value under IFRS causes a transitory shock in earnings, which decreases the reliability of financial reporting destined for firms/banks. It is worth noting that, although the study investigates the effect of IFRS on debt investment, it does not specify whether the bonds and loans are local or foreign.

One of the most important and oft-cited studies in accounting literature, by Ball, Robin, and Sadka (2008), seeks to determine whether the quality of accounting standards has a greater effect on debt or equity markets. While this study is not related to either IFRS or foreign investment, it does have a connection to the present study, as both investigate the effects of financial reporting on debt and equity markets. The study looks at the quality of financial reporting, including timeliness, as well as whether financial statements are more useful to lenders or shareholders. In doing this, the authors assume that as timely financial reporting is a costly activity, it is dependent on demand, which they measure in the study by market size. Analysing the cross-sectional data from 22 countries, they conclude that the characteristics of financial reporting are, primarily, a response to the demands of the debt market. Ball et al. (2008) suggest that increasing demand for financial reporting by debt markets puts firms and their accountants under pressure to produce financial reports in a more timely manner. In terms of IFRS, Barth et al. (2008) confirm that the adoption of IFRS by 21 EU countries is associated with a higher quality of information in terms of less earnings management, more timely loss recognition, and more value-relevance of accounting figures than was the application of the domestic standards. In Australia, Chua et al. (2012) also identifies an impact, following the application of A-IFRS, on the accounting quality that is positive in the sense that there is less income-smoothing, improved timeliness of loss recognition, and increased value-relevance of information in financial statements, especially in non-financial firms.

At the macroeconomic level, there is scant empirical evidence regarding the effect of IFRS on debt. One notable exception is a study by Beneish et al. (2015), which builds on the work of Ball et al. (2008) by investigating whether the adoption of IFRS impacts

debt and equity markets differently. They predict that since debt contracting is based explicitly on information disclosed in reports concerning company performance, holders of debt bonds are, therefore, greater consumers of financial reporting than those who invest in portfolio equity. This is because, while the latter also rely on such information, they are not contractually tied to it. They argue further that, as the debt market is considerably larger than the equity market in the vast majority of adopting countries, it cannot be ignored by any study that aims to capture the potential effects of IFRS adoption on capital markets. As with the present thesis, this study measures the change in debt and equity components of foreign investment by comparing levels before and after IFRS adoption. Similar to most studies in the literature, a pre–post design is used, with the dummy variable equal to 1 during 2006 and 2007, and zero during 2003 and 2004. The authors find that debt is, in fact, more affected by IFRS adoption than equity, thereby confirming the prediction. Moreover, their results show that, unlike foreign debt, foreign equity flows increase only when a country is perceived as having strong governance prior to its adoption of IFRS. In contrast to Yu and Whihd (2014), Beneish et al. (2015) conclude that the observed effect of IFRS adoption is more likely to stem from the quality rather than the comparability of financial information. However, it should be noted that the study does have some limitations, as it uses only short-term data and a small sample of countries.

3.3.3.3 Foreign Derivatives

A derivative is *"a financial instrument that is linked to another specific financial instrument or indicator or commodity and through which specific financial risks (such as interest rate risk, foreign exchange risk, equity and commodity price risks, credit risk, and so on) can be traded in their own right in financial markets"* (IMF, 2009,

Paragraph 5.8). Unlike other debts, no principal is advanced for derivatives, so, there is no repayment requirement; neither does any interest accrue on financial derivative instruments. Most derivatives are associated with risk, which arises in part, from the use of fair value. This includes market risk, commodity-price risk, exchange-rate risk, and trade-credit risk (IMF, 2009).

The effect of the use of fair value, both under FASB and IFRS, on derivative investments during the 2007–2008 global financial crisis is investigated by Barth and Landsman (2010). Their study, whose focus is restricted to banks, found no evidence of an effect of fair value on derivatives. Nevertheless, it does identify a lack of transparency concerning this type of investment, under IAS 132: *Financial Instruments: Presentation*. To enable investors to better understand the leverage inherent in such derivatives, the authors recommend that firms increase both the quality and quantity of their disclosures, provide more disaggregated information regarding the derivatives, and implement a risk-equivalence approach. While Barth and Landsman (2010) find that under IFRS 7, the disclosure concerning derivatives greatly improves the transparency of banks' financial statements, Chung et al. (2012) provide evidence, from the Korean equity stock market, that in derivative-related loss announcements, the quality of the disclosure is more important than the quantity.

In Australia, Chalmers (2001) examines the voluntary disclosure of derivative financial instruments using 140 listed firms, for the period 1992–1998. While the author finds evidence of an increase in the number of optional disclosures of derivative-instrument activity, she does note that this is largely confined to firms within the extractive industries, the majority of which are MNCs. She speculates that this is because such firms are driven by the necessity to be globally competitive. Her study is extended by

Chalmers and Godfrey (2004), who investigate managers' responses during the period 1992–1996 to the requirements regarding derivatives financial instrument disclosure in Australia. Their findings support those of the earlier study, also indicating a statistically significant increase in disclosure, particularly by mining and oil companies, most of which are multinationals. Overall, the results of the Chalmers and Godfrey (2004) study demonstrate that firms voluntarily disclose greater amounts of derivative instrument information because of the greater pressure exerted on them to be more transparent in their financial reporting and to comply with professional norms, especially in the international context. While neither study is related to A-IFRS, they both highlight the fact that because of the global nature of MNCs' business activities, their financial instrument disclosures, especially in relation to derivatives, are of particular importance.

Hassan (2004) investigates the value relevance of derivative disclosure under AASB 1033: *Presentation and Disclosure of Financial Instruments* by companies from the Australian extractive industry (1998 – 2001), an industry that makes extensive use of the derivative. He finds that the majority of participating entities provide little information regarding derivatives. Hassan (2004), therefore, suggests that what is needed, is more disclosure of information concerning hedging, fair value, and risk, and this needs to be enforced. Consistent with this, a later study by Taylor, Tower, and Neilson (2010) provides insights into the disclosure of financial risk management of Australian, publicly-listed resource companies, for the period 2002–2006, i.e., prior to the application of AASB 7. They find that the increase in disclosure, both voluntary and mandatory, of financial-risk management policies under A-IFRS, is associated significantly and positively with rising capital and the strength of the companies'

corporate governance. The conclusion is that, because extractive resource entities regularly seek the help of foreign capital markets to finance their projects, they may be using derivatives, either directly or indirectly. In this case, increased disclosure of financial risk management is vital. Such an increase is driven by pressure from capital market participants for greater transparency, in order to reduce the element of uncertainty in their financial decision-making. In addition, given that, under AASB 139, firms are required to document the impact of hedging arrangements on risk off-setting, the authors suggest that the implementation of AASB 139 may be associated with greater transparency in the reporting of risk-management policies, especially those related to hedging activities. These findings are consistent with those of Chalmers (2001), Chalmers and Godfrey (2004), Gallery, Cooper, and Sweeting (2008), Kent and Stewart (2008), Taylor and Tower (2011), and Wee, Tarca, and Chang (2014), which suggest that the greater volumes of disclosure that made by firms brought them increased economic benefits.

Birt et al. (2013) offer insights into the relationship between AASB 7 and financial-risk disclosure related to derivative use, in the Australian extractive industry. Their findings show that the majority of the firms in their sample (46 out of 79) do not include any information in their financial reports, about their motivation for using derivatives. However, of the 33 firms that provide reasons, most indicate that they use derivatives to mitigate the risk associated with commodity and foreign exchange. The researchers argue that, as the use of derivatives is related to risk, increased qualitative and quantitative disclosure is needed to help investors estimate the risk related to their investment decisions.

3.3.3.4 Other Foreign Debt

Other debt is an important type of financing that includes deposits, and trade credit provided by a firm's suppliers.[19] While some studies suggest that IFRS affects other debt, such as foreign suppliers (Hail et al., 2010), there is no evidence to indicate how this occurs. To our knowledge, Li, Ng, and Jeffrey (2017) is the only study to examine the impact of IFRS on trade credit. They find that this impact is considerable, due to the reduction in information asymmetry under IFRS, which improves the quality of publicly available information. However, they discover that there is no such association in countries with strong governance. They attribute this to the absence of any significant level of information asymmetry between trade-credit providers and entities in these countries. Such an explanation is not far from the finding of Cuñat (2007), Love (2011), and Nilsen (2002), who suggest that trade creditors are able to obtain information from entities if there is a long-standing, trust-based relationship between them; in this case, the suppliers are usually happy to support the entity during a financial squeeze.

In general, most of the above findings are confined to countries that are characterised by a relatively more-developed enforcement system, a stronger mechanism for controlling corruption and lower financial risk. Despite this, the fact remains that these studies do identify an effect of IFRS/A-IFRS on foreign debt; however, it should be noted that this effect does vary from component to component.

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[19] *"[Trade credit] … arises when payment for goods or services …is not made at the same time as the change in ownership of a good or provision of a service" (*IMF, 2009, paragraph 5.71).

3.3.4 Other Capital Market Studies

A number of other relevant studies that investigate the effect of financial reporting on investment decision-making, both local and foreign, and so have a connection to the present study, are reviewed in this subsection. Some of these studies examine the short-lived reaction of the capital market to the decision to adopt IFRS. One such study, by Brochet et al. (2013), examines the reaction of the UK capital market. The authors argue that IFRS adoption, by enhancing the comparability of financial statements, reduces private information. Therefore, they predict that the result of this will be a reduction in the abnormal returns to insiders, that is, direct investors. Using data from a sample of listed firms, for the period 2003-2006 (i.e. two years preceding and two years following IFRS adoption), the study identifies a marked decrease in abnormal returns, both in the short-term (within five days of adoption) and long-term (within one, three, and six months of adoption). The authors attribute this result to the enhancement of comparability, rather than the increase in quality, of financial reporting, given that the UK already had standards that produced high-quality information, prior to IFRS adoption. This is consistent with the findings of Leuz and Verrecchia (2000) and Leuz (2003), which show that information asymmetry was reduced when firms changed from the German GAAP to either IFRS or the US-GAAP. Further support for this is provided by Clarkson, Hanna, Richardson, and Thompson (2011), who investigate the impact of IFRS/A-IFRS on the value relevance of book value and earnings, for equity valuation, both in Europe and Australia. They find that, after IFRS adoption, the distribution of measurement errors for Code Law and Common Law countries converge. The researchers conclude from this that IFRS/A-IFRS may enhance the value relevance and cross-border comparability of financial reporting. A solely Australian study, by Cairns

et al. (2011) find that the mandatory use of fair value, under IAS 39/ AASB139, to valuate financial instruments and derivatives in particular, results in greater comparability of financial reports both within and between countries. Similarly, Cairns et al. (2011) conclude that mandating the use of fair value, as happened under IAS 39/ AASB 139, may improve the global information environment and provide values that are more up to date, outcomes that reflect the goals of certain standard setters, and meet the needs of users of financial reports, for information with greater relevance.

The study by Brochet et al. (2013) is relevant to the present study in terms of its use of a direct method of capturing the reduction in the information asymmetry between insider and outsider investors, after IFRS adoption. In addition, it also considers that the reduction in the returns to insiders is due to the enhancement of public information. Moreover, to avoid the variance in institutional factors from country to country, they focus only on the capital market of a single, developed country that already had a high-quality set of accounting standards, prior to IFRS adoption. This is also the case with the present study. However, the former study differs from the latter in terms of the actual focus country (the UK, as opposed to Australia, in this thesis), the variables chosen, and the method used.

Armstrong et al. (2010) conducts an event study to investigate the reaction of the EU equity market to the adoption of IFRS. The authors assume that the benefits of the adoption stem from the fact that *"…[investors] expected application of IFRS to result in higher-quality financial reporting relative to application of domestic standards, thereby enhancing financial reporting transparency, and reducing information asymmetry and information risk and, thus, lowering cost of capital"* (p.32). They preselect 16 of a possible 40 dates, most of which are related to the adoption of *IAS 39:*

Financial Instruments: Recognition and Measurement, and *32: Financial Instruments: Presentation*, between 2002 and 2005, a period that preceded voluntary IFRS adoption. The authors find an increase in abnormal returns following the IFRS event and conclude that this occurs even in countries that already had high-quality accounting standards prior to IFRS adoption. These results indicate that, while European investors expected net benefits such as convergence, increased information quality, and a reduction in information asymmetry as a result of adopting IFRS, these benefits were, in fact, smaller in some countries, possibly due to their having less rigorous enforcement systems or, alternatively, to their early adoption of IFRS (2002–2005).

This is supported by the findings of a study by Devalle, Onali, and Magarini (2010), which examines whether the value relevance of equity's book value increased after IFRS adoption, they use a sample of firms listed in 2005 on the stock exchanges of five European countries: Germany, Spain, the UK, France, and Italy. They hypothesise that a shift to IFRS facilitates foreign investment by increasing information transparency and thereby market liquidity. To test this, they use the Chow test, and preselect 2005 as the likely date of the structural break. While their findings support the notion of increased value relevance, after IFRS adoption, the evidence is limited: they identified a significant structural break in the data from Germany, Spain, and France only. They propose that the absence of such a break in the Italian and UK data may be due to the influence of other factors. Finally, the authors suggest that more time may be needed to achieve cross-border comparability of financial reporting. To our knowledge, this study is the first in the international accounting literature to adopt what the authors themselves claimed, was the innovative approach of using a structural break (Chow test) to test the assumption that increased liquidity, following IFRS adoption in 2005

stemmed from the increase in the value relevance in financial reporting under such standards. In this respect, this has great relevance for the present study.

The findings of Armstrong et al. (2010) and Devalle et al. (2010) are supported by those of Callao et al. (2007) and Daske et al. (2008). These show limited evidence of the effect of IFRS adoption on equity, and suggest that foreign investment will increase as a greater number of market participants become increasingly familiar with the requirements of IFRS. In addition, as with previous studies, Daske et al (2008) conclude that such benefits for capital markets occur in countries in which firms have incentives to be transparent and where legal enforcement is strong, and that they are most pronounced for firms that switch voluntarily to IFRS.

In a study employing a different approach, Wang and Welker (2011) investigate the impact of IFRS on managerial incentives to engage in equity issuance. They do this by looking for any increases in the cumulative value of the equity, during the period of transition to IFRS, which extends from 2002, the year in which intention to adopt was announced, to 2004, the year preceding mandatory adoption. They argue that managers expedite the issuance of equity during this period if they expect that the firm's performance will be worse under IFRS than it was under the GAAP. Therefore, stock prices issued before a firm discloses reconciliations of their financial statements from GAAP to the international standards, may fail to reveal the true picture of that firm's performance. Moreover, as the managers of such firms possess inside information about this performance, they can use such a situation to their advantage. For instance, they can arrange for the firms' financial activities to be conducted during the period of relatively more favourable market conditions that exist, before the publication of their reconciliation statements reveal the extent to which their firms' financial performance

has been impacted by the adoption of IFRS. Consequently, the authors predict that any unexpected or high-volume issuance, during the period of transition to IFRS, is attributable to the change in accounting standards. Furthermore, according to the authors, because the increase in the value relevance of accounting information occurred after mandatory application, especially from 2005Q2, when the first half-year report under IFRS was made, the increase in equity after this time (2005Q2), can no longer be attributed to an increase in information asymmetry between managers and investors. Also, they focus on a developed country instead of a developing one, and on mandatory adoption rather than voluntary adoption, because they assume that, in both the latter cases, the cost of issuing equity will be higher than the benefits.

As in the present study, the authors consider mandatory adoption of IFRS an exogenous shock to the entire capital market, which affects the equity price. Based on data from a sample of more than 2,900 listed firms in the US capital market, selected from 15 countries, including Australia, the results show that because of the information asymmetry between managers and investors, the firms did make financial decisions during the transition period as, at that time, the managers had more information than the investors. However, they did not have the same opportunity after the mandatory adoption, as the financial statements, under IFRS, contained more extensive information for investors. This is consistent with the findings of Brochet et al. (2013), and both of these studies support the argument of Ball (2006), which suggests that, unlike other political and taxation standards, IFRS is designed to provide more relevant and reliable information for the public, in order to reduce the agency problem, and thereby enhance decision-making. The findings of Wang and Welker (2011) complement the international literature by showing that accounting standards do not act

in isolation when impacting the corporate information environment and real economic activities, but, rather, do so, in combination with other institutional factors.

Finally, a number of studies have investigated the effect of IFRS on the accuracy of financial analysts' forecasts. The main argument of such studies is that as analysts are the principal consumers of financial reports, they have superior knowledge of the financial market. Therefore, if their forecasts are more accurate, after IFRS adoption, this would imply that the information under IFRS is more reliable. This argument is supported by Tan, Wang, and Welker (2011), who use a sample, drawn from 25 countries, that consisting of 2,679 firms that complied with mandatory IFRS adoption and 601 firms that adopted IFRS voluntarily, during the period 2001–2007. They find that not only does the accuracy of foreign analysts' forecast improve during the post-adoption period, but also, that foreign analysts are more attracted to the firms that adopted IFRS. The latter effect of adoption applies especially to those who already had prior IFRS experience or had a foreign portfolio before IFRS was adopted in their home country. The study also finds that both of these effects are more marked in countries where there is a considerable disparity between their former GAAP and the newly adopted IFRS. The authors suggest that comparability and usefulness of accounting data are both enhanced by accounting harmonisation. A comprehensive study by Horton, Serafeim and Serafeim (2013) examine whether the increase in forecast accuracy during the period 2001–2007 is due to the higher quality and increased comparability of accounting information under IFRS or to the increased opportunities under IFRS to manipulate earnings and thereby meet analysts' expectations. The findings confirm that IFRS provides more information to investors due to its greater comparability and that this holds true even when the standards are used by firms whose

GAAP was of a similar quality to IFRS. These results are more significant for mandatory adopters compared to both non-adopters and voluntary adopters. Australian studies such as those by Cheong et al. (2010) and Cotter, Tarca, and Wee (2012) support these findings.

To summaries, the evidence presented here provides further support for the notion that the adoption of IFRS increases the efficiency of investment decision-making. However, in some cases, this support is limited, because the studies only use data from a short time-period.

3.4 Conclusion

The studies reviewed in this chapter suggest that due to the considerable scope for flexibility in the way in which individual nations determine their own accounting standards, disclosure requirements and regulatory practices, historically, financial reporting has varied greatly from country to country. It is argued in the literature and, therefore, assumed here that, in order to reduce information asymmetry among investors and to facilitate foreign capital mobility across borders, financial reporting needs to be standardised and that this can best be achieved by all countries agreeing to use a common set of accounting standards.

From a foreign investment perspective, it was generally expected that such international standards would improve the efficiency of decision-making, by reducing the differences that existed among national accounting systems. It was believed that this, in turn, would enhance the quality and the comparability of financial reporting, thereby reducing uncertainty among decision-makers wishing to invest in foreign capital markets. The

empirical findings support the above predictions. Nevertheless, there remain a number of gaps in the existing research, which this thesis aims to explore:

1. Some have examined the topic by focusing on only one or two foreign investment variables namely, foreign portfolio equity or foreign direct investment (e.g., Gordon et al., 2012; Yu & Wahid, 2014). As can be understood from the above review, the importance of public information varies according to the component of foreign investment. Hence, it would be beneficial to examine all components in order to ascertain how each is affected by the application of IRFS.

2. Many other studies tended to focus on companies by using a cross-sectional approach. These studies generally tend to focus on a short period of time, i.e. a two-year period. As highlighted by Gray (2014), such a narrow focus may fail to capture the global convergence of financial reporting. In addition, any benefits of IFRS detected in this way, especially in terms of portfolio debt and derivatives, could be due to the changes in methods used to evaluate assets and liabilities under IAS 39 and 32, such as the introduction of the use of fair value.

3. In the literature, the use of dummy variables, which are used to measure the effect of IFRS, involves pre-selecting the date of the effect; this is most often 2005, the date of IFRS application.[20] However, such a process of pre-selection is deemed to be conceptually weak, because, even if this date is known, it may not reflect when the initial effect was actually felt. The literature shows that the foreign investment

[20] A country that adopts the IFRS takes the value of 1, and 0 otherwise, or a value (e.g. 1, 2, 3, 4, 5) 'commensurate' with the degree of adoption (e.g., Beneish et al., 2015; Ramanna & Sletten, 2014).

components vary in their reactions to IFRS. This is because, for each type of investment, investors have different needs of the information and a different degree of control over entities in which they invest. Therefore, the difference in the date of the effect of the change-over (lead or lag effect) is highly likely to occur among foreign investment components. The effect indicates with a lead when it was felt during the transition period, while it occurs with a lag when it appeared later than predicted. In view of this, using a pre-selected date may result in a false picture of how the various components of foreign investment were affected by IFRS, thereby, invalidating conventional hypothesis testing (Banerjee et al., 1992).

As a contribution to the previous literature, this thesis focuses on a single country that is, Australia. This will achieve two benefits: 1) as Australia is one of developed countries that already had high-quality accounting standards prior to the introduction of A-IFRS, this will help to indicate the benefits of A-IFRS, if any, immediately (Chua et al., 2012); 2) using a single country will help to remove any variations between countries, in terms of their application dates and implementation processes, as well as their economic, political and cultural contexts (Brochet et al., 2013).

The evidence, presented in this chapter, from previous studies shows that IFRS use is associated with increased foreign investment inflow. As one of its contributions to this aspect of the accounting literature, this thesis uses a new, more extensive dataset, which includes information on relative levels of foreign investment, across two different categories (aggregated and disaggregated components) in order to target the specific effects of restrictions on the volume and composition of foreign investment. Moreover, using both categories ensures that the validity of the present study's findings is tested in a more robust way.

Also, in contrast to those studies that use a cross-sectional approach, the present study employs time series data to determine the date of the effect (the break date) endogenously, a method that is explained in Chapter 5. This approach allows any change in a variable to manifest itself, if and when the variable is affected by the introduction of A-IFRS. This is the major part of the contribution of this thesis.

Finally, in this thesis, the data is assessed at the national level rather than the firm level. This is vital, because, in Australia, all entities are required to prepare their financial statements according to A-IFRS. Therefore, since the application of A-IFRS in Australia was, primarily, a policy adopted at the national level, the contention is that using national-level, rather than firm-level observations should add more robustness to the results.

Overall, this thesis is a comprehensive study that examines the effect of A-IFRS application at a national level on all components of Australia's foreign investment inflow, both aggregated and disaggregated, while at the same time taking into account the possible effects of other economic events (Chapter 6).

CHAPTER 4: Theoretical Framework and Research Question

4.1 Introduction

In June 2002, the Australian FRC made the decision to adopt IFRS on the 1st the January, 2005. However, as discussed in Chapter 2, Australia chose to merge its GAAP with IFRS to create a set of global accounting standards that were suited specifically to Australian entities (A-IFRS), and these were applied at the national level (Nobes & Zeff, 2016; Taylor & Tower, 2009; Zeff & Nobes, 2010). The main purpose of A-IFRS was to facilitate cross-border investment (Commonwealth of Australia, 2002). However, despite this optimistic goal, there was still a concern that the use of such standards might result in a reduction in the quality of financial reporting.

The literature review in Chapter 3 stresses that, by improving both the quality and comparability of financial reporting, IFRS adoption reduced information asymmetry, thereby positively impacting foreign investment.[21] However, some studies also point out that this impact differs according to the type of foreign investment. Moreover, they contend that a number of institutional factors, both exogenous and endogenous, such as legal systems and their enforcement regimes, taxation and political systems, extent of capital market development, and level of risk, can also affect the reaction of foreign investment to IFRS adoption.

[21] See, for example, Armstrong et al. (2010), Ashbaugh (2001), Barth et al. (2008), Bradshaw et al. (2004), Covrig et al. (2007), Daske et al. (2008), Kim et al. (2011), Leuz (2003).

The objective of this chapter is to develop a framework that depicts the effect of the converged standards (A-IFRS) on foreign investment inflows. Within this framework, a research question is developed to describe the link between A-IFRS application and foreign investment. Given that the effect of this application could differ according to the type of investment, the research question is further developed to describe the anticipated effect on each individual component of foreign investment.

The remainder of this chapter is organised as follows: in Section 4.2, the research framework is developed, to demonstrate the effect of A-IFRS on foreign investment, while in Section 4.3, the research question regarding the relationship between A-IFRS and foreign investment inflows is provided. In Section 4.4, the A-IFRS event window is set. Finally, Section 4.5 presents a brief conclusion.

4.2 A-IFRS – Foreign Investment Framework

The objective of this thesis is to estimate directly the benefits derived from the application of A-IFRS by examining the changes in foreign investment, both equity and debt, around the date of this application. The main argument, here, is that A-IFRS benefits Australia by making it more attractive to foreign investors. This benefit is believed to be due to the improvement in financial reporting under such standards, which enables foreign capital providers to make better decisions regarding the allocation of their resources and the ways in which their investments may be improved (see Figure 4.1).

Figure 4. 1: A-IFRS-Foreign Investment Framework

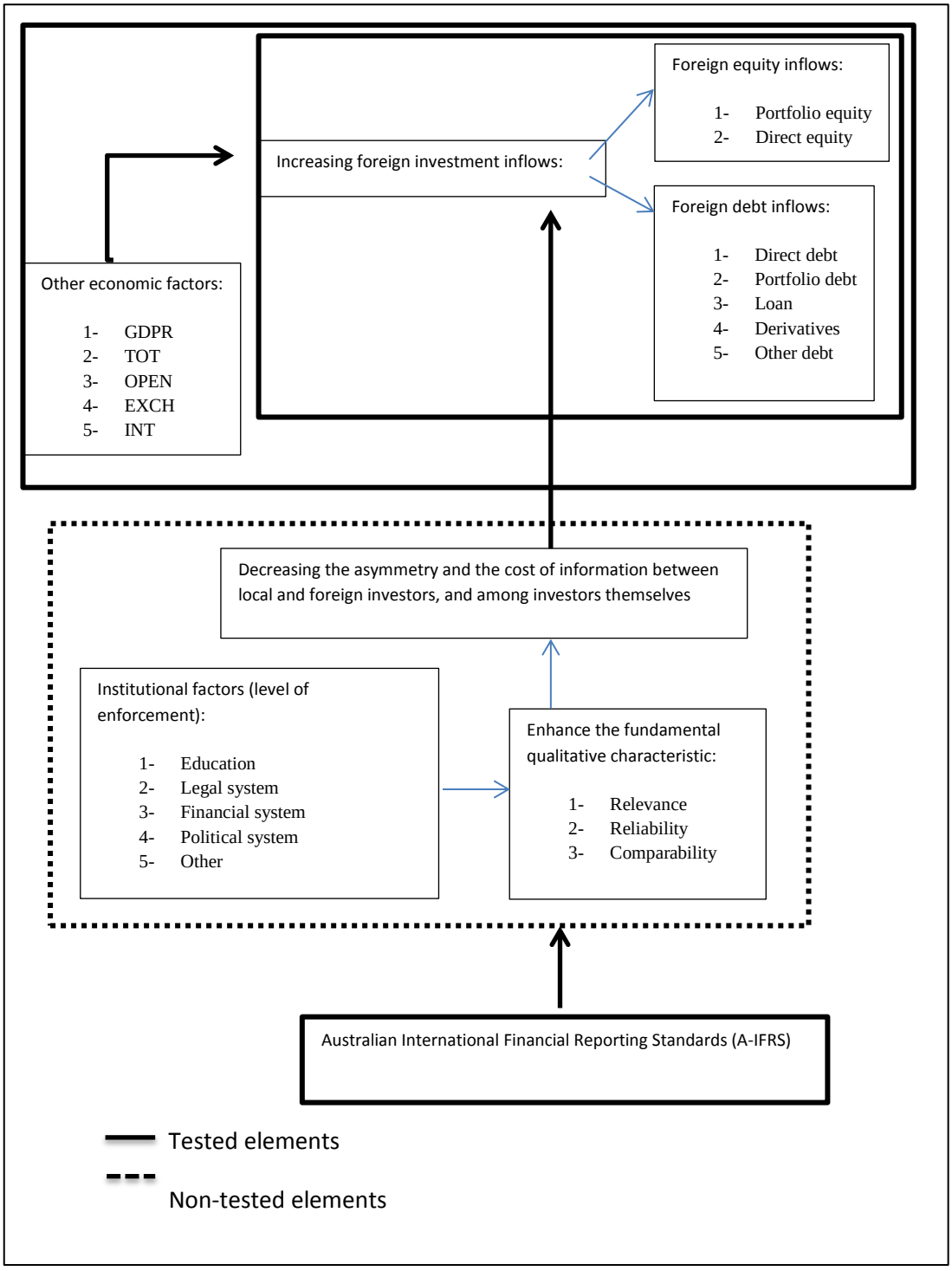


Figure 4.1 above illustrates how the qualitative characteristics of financial reporting, of which relevance and reliability are considered fundamental (SAC 3, 1990, paragraph 7), can affect foreign investment. For financial reporting to be value relevant, it must help decision makers to evaluate the past and present performance of an entity and accurately predict future events before making investment decisions. It should also provide feedback, either to confirm or correct these evaluations. However, because of the uncertainty about future events, the relevance of the information depends on its reliability. Information is considered reliable only when it represents faithfully the transaction events. Thus, relevant and reliable information will enhance the confidence of users when making decisions as it is free from error or bias (Hassan, 2004, p. 66). Empirical studies such as those by Cheong et al. (2010) and Chua et al. (2012) have found that A-IFRS increases the relevance and reliability of financial reporting.

Although relevance and reliability are important, they are not sufficient to guarantee high-quality financial reporting. International comparability of information is also required to reduce the cost of its acquisition (Beneish et al., 2015; Brochet et al, 2013; DeFond, et al., 2011), thereby making foreign capital more mobile. Consistent with this notion, Ashbaugh (2001) and Bradshaw et al. (2004) found that there is more US investment in foreign companies whose accounting methods conform closely to those of the US GAAP. Further support is provided by Covrig et al. (2007) and Yu and Wahid (2014), who found that foreign mutual fund ownership is higher among companies using IFRS.

Overall, by enhancing the quality of financial reporting, the application of A-IFRS should reduce information asymmetry and the cost of information acquisition, as well

as enhancing decision-making, thereby attracting more foreign investment. By focusing only on how A-IFRS changes the level of foreign investment inflows in each component, this thesis seeks to provide direct evidence of how A-IFRS accounting standards affect investment decisions by reducing information asymmetry among investors. However, this cannot be achieved unless there are high-quality accounting standards that are also more comparable. Therefore, in terms of these two characteristics, the tests are indirect in nature (see Armstrong et al., 2010; Wang & Welker, 2011; Yu & Wahid, 2014).

Figure 4.1 shows a number of institutional factors, i.e., the legal standards system and the enforcement regime, which also affect the benefits of IFRS. For instance, when disclosure of important information is mandated, this reduces enforcement costs and limits the opportunities for management to manipulate a firm's performance. Furthermore, a solid enforcement regime will reduce the cost of monitoring investments by providing incentives for entities to produce financial reporting that will be of a sufficiently high quality to satisfy the needs of outside investors (Bradshaw et al., 2004; Porta et al., 1998; Shim & Gordon, 2011). As discussed previously in Chapter 3, Akisik and Pfeiffer (2009), Amiram (2012), Cheong et al. (2010), Daske et al. (2008), and Florou and Kosi (2015) demonstrate consistently that the benefits of IFRS are more likely to be experienced in countries such as Australia, where the application of the standards is mandated by a strong legal standards system and backed by a robust enforcement regime. Studies, like the present one, that focus on a single country mitigate the need to control for the above institutional factors, as all entities in the same country must abide by the same rules. Nevertheless, such factors will be taken into account, particularly when the results are interpreted and compared with those of past

studies that focused on other countries.

In addition, Figure 4.1 illustrates a number of economic factors; these were highlighted in previous studies as having a considerable effect on foreign investment. One of the major events that occurred within the A-IFRS implementation was the turnaround in the mining sector. This highlights the fact that the magnitude of the changes observed in the foreign inflow variables could be due to the commodity-price boom experienced by Australia. According to Connolly and Orsmond (2011), Kearns and Lowe (2011), and Minifie (2013), the mining boom caused a substantial increase in investment, with further investment still in the pipeline. The effects of these flows were felt through growth rates, rising interest rates, improved terms of trade, and appreciation of the Australian dollar to a 30-year high.[22] The study controls for this economic event by using the following variables: RGDP, TOT, OPEN, EXCH, and INT. These variables, their definitions, and the purpose of their use in this thesis are described in detail in Chapter 6.

To summarise, within the framework of the present thesis, the fundamental question is whether the introduction of A-IFRS has resulted in information of a high quality being made available to foreign investors, or, put simply, whether foreign investment is more readily attracted when A-IFRS is used.

[22] Prior to this date, Australia had very low commodity-prices, and international companies such as Rio Tinto and BHP Billiton were underinvesting. In 2003, the price of resources, such as iron ore and coal, was rising. This created the mining boom that increased investment in the mining sector (Minifie, 2013).

4.3 Research Question

Investors prefer to invest either in their own country or in a country with similar accounting standards, as, in both cases, their familiarity with the standards reduces the cost involved in acquiring or processing the financial information they need (e.g., Bradshaw et al., 2004). Therefore, it is not surprising that those economies that do not have in place a financial reporting system that can provide potential investors with relevant, reliable, and comparable information experience considerable difficulty in attracting foreign investment (Akisik & Pfeiffer, 2009). Therefore, conceptually, the main benefit of IFRS is likely to be the lower transaction costs associated with foreign investment and trade. These will flow from the decrease in information asymmetry that results from the greater homogeneity of such global accounting standards. According to this conceptual viewpoint, Australia may benefit from A-IFRS, in the following way. The use of IFRS by Australia's trading partners, such as the EU, together with increased global acceptance of, and familiarity with, these standards by others could enhance information symmetry among investors, both local and foreign. This, in turn, would minimise the necessity for such investors to incur search costs in assessing the information required to evaluate firms' financial and management performance. The ultimate benefit would be reduced risk and, hence, more foreign investment in Australia.

Prior to 2005, the main argument against the use of IAS in Australia was that the standards were inferior in quality to the Australian national standards (A-GAAP). This, together with the fact that they were not globally accepted, meant that IAS was considered to be of no value to Australia (e.g., Collett et al., 2001). However, this perception changed in 2005, when IFRS became mandatory in many countries and

acceptable in others (Whittington, 2005). In addition, this was also the year in which substantial changes to IFRS – the result of an improvement project initiated by the IASB – became effective (see Chapter 2). In view of these developments, the government now judged that the time was right for Australia to begin using IFRS. This thesis establishes the research question as follows:

> ***Are foreign investment inflows to Australia significantly higher following the introduction of A-IFRS?***

In keeping with the aim of this thesis, this section examines how A-IFRS increases each of the debt and equity components of foreign investment inflow. Such a disaggregated approach is important because, according to previous studies, investors are not equal in terms of their objectives, needs, or even their roles in the entities and, therefore, may react differently to any reduction in information asymmetry (Ball et al, 2015; Benish et al., 2015; Goldstein & Razin, 2006; Márquez-Ramos, 2011; Razin et al., 1998).

4.3.1 A-IFRS and Foreign Equity

The equity flows can be examined through two lenses i.e., those of portfolio equity and direct equity. According to Goldstein and Razin (2006), portfolio equity represents outside investors who own less than 10% of a company's shares and so cannot access its private information. Therefore, they depend more on public information. In contrast, direct equity represents inside investors who own 10% or more of the shares and so have access to inside information. Armstrong et al. (2010) and Shima and Gordon (2011) claim that in countries with strong legal enforcement, IFRS has a positive impact on portfolio equity. The combination of a strong enforcement regime and high-quality financial reporting is an incentive for outside investors, as it reduces monitoring

and information processing costs. Yu and Wahid (2014), therefore, conclude that the international harmonisation of accounting reporting systems is vital for attracting foreign equity. However, there is no clear evidence of an increase in direct equity, in developed countries following IFRS adoption. This is consistent with the arguments advanced by Goldstein and Razin (2006), Zeghal and Mhedhbi (2006), that those who invest in direct equity have privileged access to company information, and are not dependent on public information. It can be inferred from this that investors in portfolio equity are more exposed to information asymmetry and adverse selection than those who invest in direct equity. The greater availability of public information under A-IFRS, therefore, should affect portfolio equity more than direct equity.

In sum, this thesis investigates the effect of A-IFRS application on foreign equity, disaggregated into portfolio equity and direct equity. In this way, it can address the contradictions apparent in the literature, which arise from studying inflows of both these components, together.

4. 3.2 A-IFRS and Foreign Debt

The application of A-IFRS may affect debt providers by enhancing public information, which, in turn, would allow lenders to estimate the quality of credit more accurately. Such an effect is examined in this thesis through five lenses: those of foreign direct debt (FDD), foreign portfolio debt (FPD), foreign loans (FL), foreign derivatives (FDR), and other foreign debt (OFD).

Foreign Direct Debt

FDD is the debt between affiliates of the same MNC. Therefore, those who invest in FDD are considered to be inside investors. Since, as such, they have the right to access

inside information, it was initially expected that, like FDE, FDD would remain unaffected by the use of A-IFRS. Nevertheless, studies have that international tax structures can have a considerable influence on MNCs' financial accounting policies concerning their financial decision-making, especially in relation to FDD. This is due to the potential of such structures to impact a company's cash flow and thereby its bottom line (e.g., Kayis-Kumar, 2015). In view of this key role played by tax in determining the financial outcomes for MNCs, it is hardly surprising that they are motivated to avoid paying as much tax as possible.[23] They do this by shifting profits to low-tax countries, using a number of different methods: estimation methods, transfer-pricing methods, used for goods and services, and the use of internal debt (FDD) between their affiliates (e.g. De Simone, 2016). However, IFRS requires consistent methods of estimating, and the disclosure of any subsequent changes in these methods, as well as increased comparability, in conjunction with an increase in the frequency of transfer-pricing audits, under IFRS (e.g., Ernst &Young, 2005; Taylor et al., 2011). These requirements should in fact, have reduced the use of the estimation and transfer-pricing methods for goods and services. Consequently, if the increase in profit shifting stems mainly from the use of FDD as the only legal way for MNCs to shift their profits, the increase could be considered to be the result of increased information transparency. A limited number of studies have investigated this relationship between IFRS and FDD. For instance, Márquez-Ramos (2011) identified a significant increase in direct debt in

[23] Profit-shifting results in a difference between an entity's reported income and its actual income. The income from production is under-reported/over-reported in countries with relatively high/low tax rates, because the firm claims lower/higher than market prices for intra-firm international shipments of its products. Inversely, internal purchases may be under-reported/over -reported (Bartelsman & Beetsman, 2000).

the EU, following its adoption of IFRS, which, she notes, could be associated with the decrease in information asymmetry. In addition, Taylor and Richardson (2014) found that, in Australia, MNCs are subject to thin capitalisation. Therefore, based on the above discussion and the findings of these previous studies, the effect of A-IFRS on FDD is essentially an empirical issue.

Foreign Portfolio Debt and Loans

Like portfolio equity, investment in FPD and FL is considered to be the domain of outside investors who depend on public information. Yet, studies point out that the financial reporting that satisfies the needs of the equity market may not be as useful to the debt market (e.g., Ball et al., 2015; Florou & Kosi, 2014). This is because, while using financial reporting to evaluate shares is the priority for shareholders, debt providers use it to evaluate the financial performance of the entity and monitor the conditions of the contract. Therefore, the effect on the equity market, of using IFRS cannot be extrapolated directly to the debt market (e.g., Ball et al., 2015; Florou & Kosi, 2014). These studies also identify two important needs of debt providers: *relevance and reliability*. Under the agreement between the company and its debt provider, financial reporting is used by the provider to control the conditions of their contract and evaluate the firm's financial position, by which they can estimate risk. In order to do this, the firm must provide reliable information (e.g., Ball et al., 2008; Ball et al., 2015).

There is considerable debate about whether or not A-IFRS is able to meet this need, especially in regard to their recognition and measurement rules under fair value accounting (e.g. 138 and 139) (e.g., Ball, et al, 2015; Florou & Kosi, 2015). On the one hand, such accounting can enhance the public information environment by reducing the

opportunities for managers to hide bad news (agency problem), as well as providing investors with more timely and up-to-date asset values that accurately reflect the true financial performance of their companies. Consequently, if using A-IFRS provides the more relevant and reliable information considered essential by debt providers, the expectation is that using A-IFRS will lead to an increase in foreign debt (Ball et al., 2015; Florou & Kosi, 2015). On the other hand, it is argued that the use of fair value, under IFRS may reduce the reliability of financial reporting, thereby increasing information asymmetry. This is because the use of fair value may result in the recognition of unrealised economic gains, such as those from trading-securities and other financial instruments. In addition, IFRS require the recognition, in income statements, of transitory losses and gains from the use of fair value, which may impair the usefulness of such figures for decision-making (Ball et al., 2015; Florou & Kosi, 2015). Furthermore, as the standards also require the extensive use of unverifiable estimates and judgements, concerning the valuation of assets and liabilities, there can be increased opportunities for entities to manipulate balance sheets and earnings (earnings management), thereby reducing their reliability. Because of this, financial reporting under A-IFRS may not be useful for debt providers (Ball et al., 2015).

In their studies, which examined the association between IFRS and portfolio debt, Beneish et al. (2015) and Florou and Kosi (2015) found a significant, positive result. Similarly, Chen et al. (2015) and Kim et al. (2011) identified a significant, positive relationship between IFRS and foreign loan. In addition, Australian studies found no evidence of a reduction in the relevance or reliability in financial reporting, under A-IFRS (e.g., Cairns et al., 2011; Cheong et al., 2010; Chua et al., 2012; Jeanjean & Stolowy, 2008). In view of these findings, the present study anticipates an increase in

both portfolio debt and loans after the use of A-IFRS.

Foreign Derivatives

The next type of foreign debt is FDR. The use of these by an entity usually entails risk. This could be either financial in nature, stemming from changes in the circumstances of the business itself, or it may be economic risk that arises from changes in the external economic environment. Since such risk can cause earnings volatility, which has the potential to negatively influence a firm's performance (Hassan, 2004), it provides managers with a strong incentive to use derivative debt to minimise the risk, thereby increasing their firms' value and, ultimately, maximising shareholder value (Hassan, 2004; Taylor et al., 2011). However, to ensure that managers do not act opportunistically, they must provide more quantitative and qualitative disclosure, which in turn will reduce the cost of information for investors (Birt et al., 2013; Hassan, 2004; Taylor et al, 2011). In addition, entities can trade derivatives in capital markets by selling and buying the risk in expected cash flows (IMF, 2009, paragraph 5.80). Keeping in mind that the main objectives of financial reporting are assist users to identify the level of risk involved in their investment and understand the risk management policies of entities, any increase in the disclosure related to such investment could affect the expected rate of return that financial-report users demand from that entity, thereby impacting upon their decision-making.

Birt et al. (2013) suggest that extensive disclosure of risk results in greater transparency of financial reporting, which enables investors to estimate precisely the level of risk carried by both their existing and potential investments. Taylor et al. (2010) best summaries this by stating that, in disclosing risk, firms are providing value-relevant information. Consistent with this, the expectation, here, is that the higher levels of

disclosure under A-IFRS, in conjunction with greater international comparability, will encourage more foreign investment in derivatives.

Other Foreign Debt

The final debt component is OFD. According to the IMF (2009), this type of debt includes currency and deposits, other payable accounting, and credit debt, from both financial and non-financial firms. The IFRS conceptual framework states that "[t]he *objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity"* (IASB, 2010, p.9). Yet, to date, there is virtually no evidence of how other credit is affected by the use of IFRS. The expectation is that lower information asymmetry, under IFRS, increases foreign credit debt; however, this only becomes significant "*where there is less trust between parties"* (Li et al., 2017). Li et al. (2017) suggest that, in countries that already had high quality accounting standards before IFRS as well as strong enforcement, there is no trust issue between the firm and the other debt providers. This notion is supported by the findings of theoretical financial studies that, unlike traditional debt, which typically relies on debt covenants or financial reporting to protect the debt, other debt relies more on trust arising from close, long-term relationships between debtors and creditors (e.g., Cuñat, 2007; Love, 2011; Nilsen, 2002). Most financial empirical evidence on this topic indicates consistently that firms increase their demand for short-term credit, either when public debt providers are suffering from information asymmetry or when the firms themselves are trying to cope with a financial squeeze (e.g., Abad et al., 2017).

In keeping with this, in situations in which high information asymmetry exists or where

there are financial difficulties, more other debt will be used. This is because the relationship between other debt providers and entities is based on trust arising from their long-term relationship, which enables the former to access private information about the latter. Therefore, if A-IFRS enhances the information environment, it may well have no effect on other debt. Accordingly, the question of the effect of A-IFRS on OFD is an empirical issue.

To summaries, in this section, the question of whether Australia's foreign investment inflows increased after the use A-IFRS due to the reduction in information asymmetry faced by foreign investors is formulated. If there was an increase, a significant positive change in foreign investment, around 2005, can be expected.

It is important to reiterate, at this stage that, while the literature shows that the benefit of IFRS stems from both the standards being of higher quality and the financial reporting being presented in a form that is more familiar to investors, this thesis focuses on how A-IFRS increased the level of foreign investment inflows in each component. Thus, it provides direct evidence of how A-IFRS accounting standards affect investment decisions by reducing information asymmetry among investors. On the other hand, the presence of a high quality of financial reporting under A-IFRS can only be extrapolated from the evidence of any increase in foreign investment around 2005. More details are provided in Chapters 5 and 6.

4.4 Setting the Event Window

The most critical step in this investigation is to identify the A-IFRS event window. The time frame within which any effect of A-IFRS on Australia's foreign investment will appear in the various components of that inflow. The process of arriving at the most

feasible time frame for this is a complex one. This involves a general review of the timeline of the implementation process. Careful consideration of a number of other factors that can influence the timing of the effect, such as the type of foreign investment components and the effect of other economic events that were concurrent with A-IFRS application, are needed.

The convergence process began on 3rd of July 2002, when the FRC of Australia announced that the use of the Australian equivalents of IFRS (i.e., A-IFRS) would be applied as of the financial period beginning on or after 1st of January 2005. Subsequently, the AASB issued AASB1: *First-time Application of Australian Equivalents to IFRSs*. Australian entities were required to restate their financial statements according to the A-IFRS for the period ending on 31st December, 2004. In addition, they were requested to reconcile their financial statements under A-GAAP to those under A-IFRS, for the opening balance on 1st of January 2004, and the end-of-year balance on 31st of December 2004, and provide an explanation of any adjustments made, particularly those under AASB 139. Under AASB 1, entities were allowed to apply the requirements set out in the guide to the application of AASB 139, regarding the ways in which the fair value of financial instruments is determined. The subsequent gains and losses are treated, either: *"[1)] prospectively, to transactions entered into after 25 October 2002, to align the relief with US GAAP requirements [; or 2)] prospectively, to transactions entered into after 1 January 2004*." (Deloitte, 2005).[24] According to Bradbury (2008), there was no Australian equivalent standard of AASB 139 before the decision was made to change over to A-IFRS. This means that the

[24] https://www.iasplus.com/en/binary/au/2005-02.pdf

financial reporting for the period during which A-IFRS was applied for the first time would provide incremental information for decision-makers. Wang and Welker (2011) state that the first report under AASB 1, on 30th of June, should have contained sufficiently detailed information to enable users to understand any adjustments to the balance sheet, and profit and loss accounts.

Moreover, to ensure that investors were provided with information regarding the likely impact of A-IFRS on the financial position and operating results of entities, AASB 1047: *Disclosing the Impacts of Adopting Australian Equivalents to International Financial Reporting Standards* was issued by the AASB in April 2004. This standard was implemented in a two-step process, over the first two years following the initial application of A-IFRS. The first step concerned the annual or mid-year reporting, on, or after, 30th of Jun 2004, in which the entities were requested to disclose information about how they had managed the transition to A-IFRS, and about what they perceived to be the key differences between their accounting policies under the A-GAAP and those under A-IFRS. In the second step, for the annual or mid-year reporting, on, or after, 30th of June 2005, entities were required to disclose any identified or reliably estimated changes to their financial statements that occurred under A-IFRS (AASB, 2004; Commonwealth, 2002; Jubb, 2005; Wang & Welker, 2011).

The Australian Securities Exchange (ASE) required mid-year reports to be provided within 75 days of the half-year mark, while annual reports were to be made available within three months of the end of the fiscal year. This meant that the change-over period to A-IFRS for Australian reporting entities was 2004Q3, the quarter in which the first mid-year financial reports were available for public use.

A number of factors may also influence when the effect of A-IFRS manifests itself. For instance, while the effect of IFRS adoption was an overall increase in foreign investment flows, this effect may have differed from component to component for such investments. According to Ball et al (2008) and Beneish et al. (2015), debt providers are more sensitive to accounting information and, accordingly, are more prolific consumers of it than investors in portfolio equity. In addition, Florou and Kosi (2015) state that information asymmetry may affect loan providers less that portfolio debt providers, as the former are informationally advantaged due to their ability to access inside information and holding equity and have access to insider information. Therefore, the expectation is that the effect of A-IFRS on foreign portfolio debt will have manifested itself earlier than the effect on other components after the mid-year comparative financial reports were issued, i.e., in or after 2004Q3, if the information contained in such reports was relevant and reliable. This trend may also have been followed by loans and equity.

With regard to direct equity and direct debt, the expectation is that neither will show an effect of A-IFRS, as both are considered to be the domains of internal investors who have access to inside information. However, if the direct debt was related to profit-transfer, it is expected that the effect will appear after the date on which use of A-IFRS was mandated, i.e., with a lag. This is because, after this, there would have been limited opportunity or none at all, for MNCs to use transfer pricing, or any of the estimation methods, to transfer their profits. Thus, the only way for them to do this would have been by using internal debt between their affiliates.

Regarding derivatives, many of the studies reviewed in Chapter 3 provide evidence that their use is associated with risk. Therefore, the studies suggest that, to invest in

derivatives, investors need to have access to a greater quantity of high-quality information regarding the associated risk (Taylor et al., 2010). To meet this need, in 2005, the IASB issued *IFRS 7: Financial Instruments: Disclosures,* for adoption on 1st of January, 2007. Later, the AASB issued *AASB 7*, to be implemented on the same date, the purpose of which was to provide investors in derivatives with information about the nature and extent of risks arising from financial instruments. The main requirement under *AASB 7* is that entities provide a greater quantity, as well as a higher quality, of disclosure concerning risk and the role played by fair value, especially in relation to financial derivatives (Birt et al., 2013; Chung et al., 2012). In view of this, it is predicted that there will be evidence of a substantial effect on foreign investment in derivatives after the implementation of AASB 7, in 2007.

Regarding other foreign debt, while the suggestion is that accounting information, especially under IFRS, plays an important role in the decisions made by those who provide such debt, such as suppliers, for instance (e.g., Hail et al., 2010), there is insufficient evidence to support this. Therefore, the issue of whether the effect of A-IFRS on other foreign debt is to be anticipated with a lead or a lag is an empirical one.

Based on the above discussion, and because the various components of foreign investment may have reacted differently to the reduction in information asymmetry that followed A-IFRS application, the period 2004Q3-2007Q3 is chosen as the window

during which any structural break associated with this application, is likely to appear (see Figure 4.1).[25]

As this thesis covers a 24-year period (1989–2012), it is anticipated that Australia's foreign investment inflows may also show evidence of the effects of other economic events that occurred during this time, including the Asian Financial Crisis (AFC) of 1997-1998, and the Global Financial Crisis (GFC) in 2008. These events are tabled in Figure 4.2.

[25] After 2007Q3, it is expected that foreign investment flows will show evidence of the negative effect of the Global Financial Crisis (GFC).

Figure 4. 2: A-IFRS Event Window and Other Economic Events over the Period 1989–2012

1989	1993-1995 GFL &	1997-1998	2000	3 Jun 2002	2003	1 Jan 2004	30 Jun 2004	31 Dec 2004	30 Jun 2005	15 Sep 2005	31 Dec 2005	31 Mar 2006	1 Jan 2007	2008	2012
	MFC	AFC	GST	Announcement of the application of A-IFRS	CPB	Date of transition opening audited balance sheet under A-IFRS for the entity that prepares its half-year reported for the period ending 30 Jun 2005	Half-year comparatives. The first time of implementing AASB 1, AASB 1047, AASB 139, AASB 132.	Full-year comparatives	First half-year A-IFRS compliant report required	Dead line of the first half-year A-IFRS	First full-year A-IFRS compliant report required, and restated comparative for the full year ending 31 Dec 2004	Deadline for filling the first full-year A-IFRS compliant report	First time of implementing AASB 7 in Jan	GFC	

Note: GFL= Global Financial Liberalisation, MFC= Mexican Financial Crisis, AFC= Asian Financial Crisis, GST= Goods and Service Tax, CPB= Commodity-Price Boom, GFC= Global Financial Crisis.

(see: AASB, 2004, Armstrong et al., 2010; Birt et al., 2013; Commonwealth, 2002; Wang & Welker, 2011).

4.5 Conclusion

The present thesis examines the effects of the introduction of A-IFRS, a set of high-quality accounting standards, on foreign investment inflows. When the decision was made for Australia to use A-IFRS, it was expected that these standards would remove the financial barriers faced by foreign investors wanting to invest in Australia, by providing more relevant, reliable, and globally comparable financial reporting.

Consequently, to address the objective of the present study, this chapter developed a broad theoretical framework that focused on foreign investment inflows. A question was developed to examine the association between A-IFRS and foreign investment inflows, in equity and debt. Both the framework and question draw on Australian and international, accounting and financial studies in the areas of IFRS/A-IFRS, investment and financial reporting quality.

The following chapters (5 and 6) each detail the data collected and the specific research method used to investigate the research question formulated in this chapter, before finally presenting the results.

CHAPTER 5: Descriptive Statistics and Structural Break Test

5.1 Introduction:

In this chapter, by means of various structural break tests, I investigate whether A-IFRS affects Australian foreign investment inflows. It is a known fact that any event associated with policy change, a phenomenon identified by economic theory, can result in a structural break. As the introduction of A-IFRS in 2005 may be viewed as a policy change, a structural break test can be carried out to determine whether any break that is identified in the foreign investment inflow series may be associated with the date of the A-IFRS application, and whether that break is positive or negative.

Before carrying out the structural break test, it is important to understand the trend and pattern of each of the selected variables. Therefore, this chapter first examines the time-series properties of the components of foreign investment inflows, both at the aggregated and disaggregated levels to see if there is any visual impression of a structural break due to the introduction of A-IFRS, or any other economic events.

The traditional unit root test is used to check the stationarity of the foreign investment inflow series. A policy change such as the use of A-IFRS can result in a structural break that may make an otherwise stationary series appear non-stationary. One of the aims of this chapter is to test for unit root, in the presence of a structural break in the foreign investment inflow variables. Here, firstly, I apply an exogenously determined structural break of 2005Q3, as the date on which the first mid-year financial reporting, under A-IFRS, was available for public use (see Section 4.4 for details). Next, rather than pre-selecting the date, I use the unknown-structural-break approach, adopted from the

macroeconomic literature, to determine the break date, endogenously. Since the sample period covers 24 years (1989Q1—2012Q4), more than one structural break is anticipated, so, the use of the multiple structural break test is deemed appropriate. Finally, I pinpoint the timing of any breaks that manifest themselves and then determine whether they can be associated with A-IFRS application. For each of the inflow variables, I confirm whether the coefficient of the structural-break dummy is positive or negative. If the values are significant and positive, I can conclude that the foreign investment inflows increased following the introduction of A-IFRS.

The structure of this chapter is as follows: Section 5.2 presents the data, followed by the descriptive statistics. Then, in Section 5.3, the stationarity and unit root tests are applied in order to determine whether the data are stationary or have a unit root, with or without trend. In Section 5.4, the structural break tests are applied to indicate the structural break date both exogenously and endogenously. Finally, a conclusion of the results is presented in Section 5.5.

5.2 Data and Descriptive Statistics

This section provides an overview of the trend and pattern of each component of Australia's foreign investment inflow. As shown in Table 5.1, the flow, measured in US dollars, is a quarterly series, compiled by the IMF and made available on the International Investment Position Statistics database.[26] Foreign inflows to Australia are divided broadly into total foreign equity flow and debt flow. As discussed in Chapter 4, the total equity inflow is further disaggregated into direct equity and portfolio equity inflows, while the

[26] The data is also available on the database of the Australian Bureau of Statistics (ABS), in AU$.

total debt inflow is disaggregated into direct debt, portfolio debt, derivatives, loans, and other foreign debt.

In this section, we describe the various types of foreign investment flow to Australia and discuss the role played by public information in investment decision-making. The disaggregated series allows us to assess the effect of A-IFRS use on each variable and to determine whether this effect differs from one variable to another. Table 5.1 presents the stocks of various types of foreign investment and their definitions, which are similar to those described in the IMF's Balance of Payments Manual.

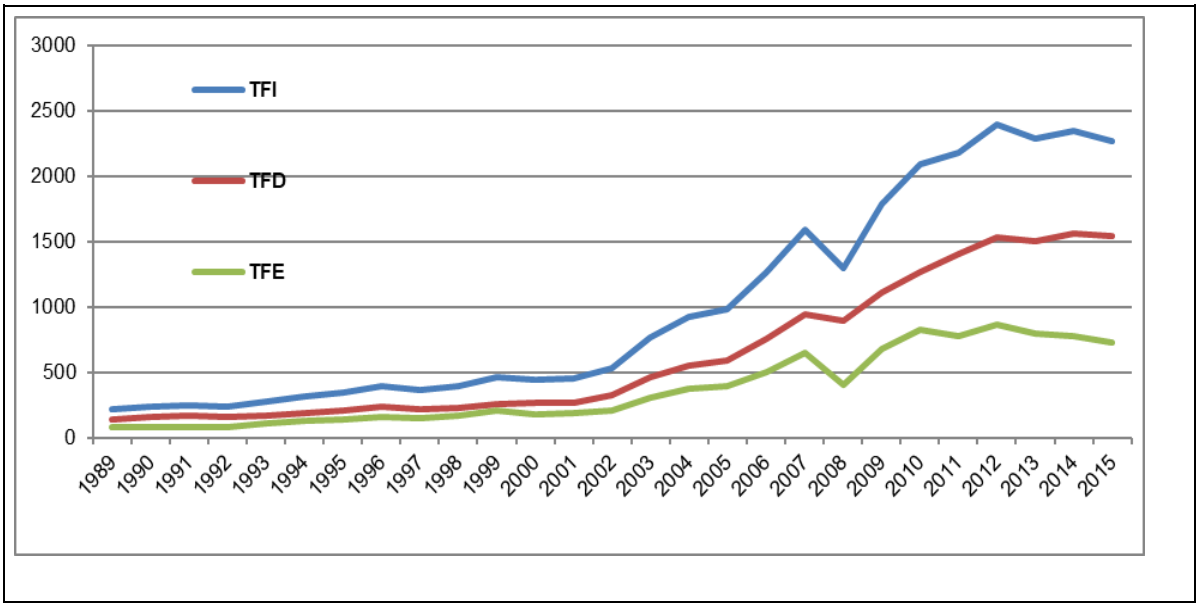
Table 5. 1: Foreign investment inflows to Australia

Variables	Definitions
FPE	Foreign portfolio equity is equity investments in Australian projects by foreign corporations, where the investment constitutes less than 10 % of the common shares.
FDE	Foreign direct equity is equity investments, of non-residents in Australian corporations when there is ownership of 10 % or more of the common shares.
FDD	Foreign direct debt is short- and long-term borrowing from non-resident (foreign) corporations and their affiliates by Australian residents.
FPD	Foreign portfolio debt is short- and long-term debt of Australian residents owed to and by foreigners.
FL	Foreign loans of Australian residents owed to non-residents.
FDR	Foreign derivatives owed by Australian residents.
OFD	Other foreign debt is all other debt not mentioned above.
TFE	Total foreign equity (TFE): FDE + FPE.
TFD	Total foreign debt (TFD): FDD + FPD +FDR + FL + OFD.
TFI	Total foreign investment (TFI): TFE + TFD
Sources of data: Balance of Payment and International Investment Position Statistics (BOP/IIP). http://data.imf.org/?sk=7A51304B-6426-40C0-83DD-CA473CA1FD52.	

Total Foreign Investment

Figure 5.1 depicts Australia's TFI and its disaggregated components, that is, TFD and TFE. For the period 1989–2015, it shows an increase in TFI, which reflects the dependence of the Australian economy on foreign investment to close the investment savings gap. This is a common feature of developed countries. It appears that the increase was more rapid from 2002 onwards. Likewise, both TFD and TFE show a general upward trend after 2002.

Figure 5. 1: Australia's Total Foreign Investment (TFI) disaggregated as Total Debt (TFD) and Total Equity (TFE) in US$bn, 1989-2015



Source: calculated from IIP data.

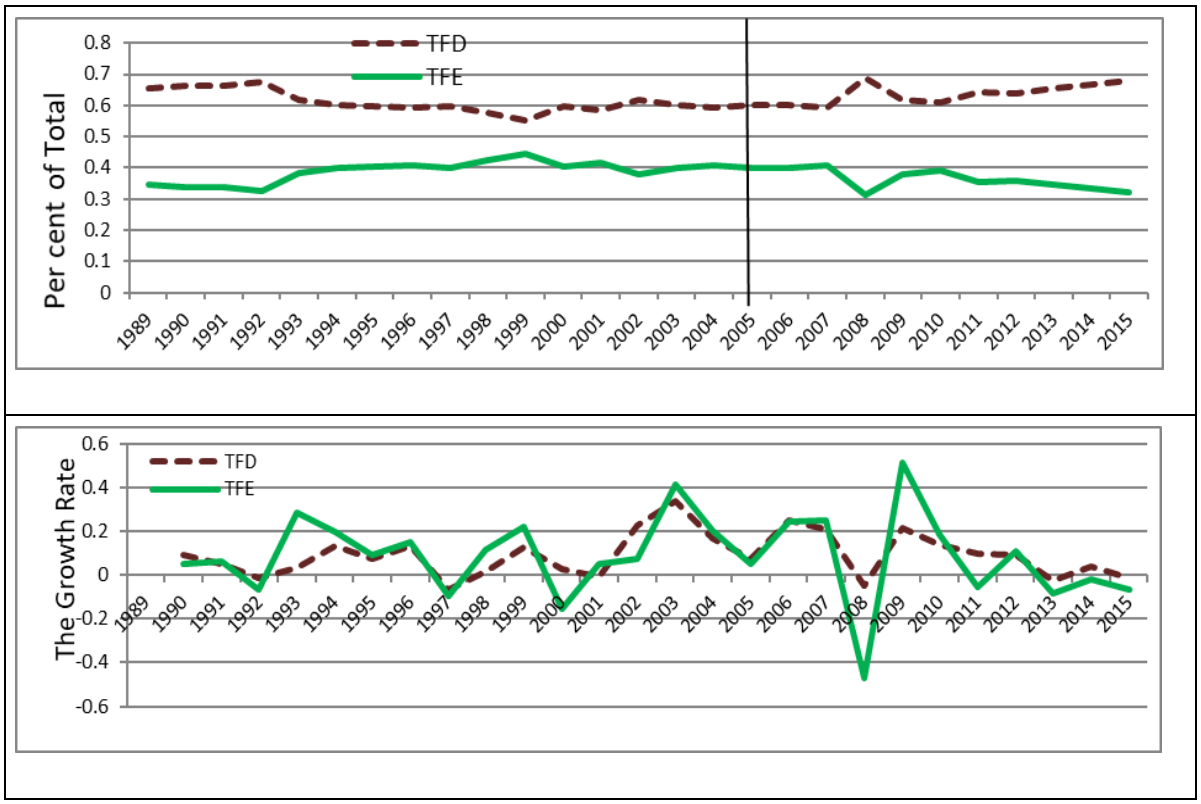
Figure 5.2 indicates that, during the period examined in this study, total foreign debt (TFD) constituted the largest portion of foreign investment inflows (TFI) to Australia. During the Global Financial Liberalisation (GFL) period of 1993–1994, total equity (TFE) as a proportion of total investment increased by 5%. During the Asian Financial Crisis (AFC) of 1997–1999, total equity (TFE) and total debt (TFD) both decreased, as shown in Figure 5.1; however, TFE was affected to a lesser degree than TFD. This suggests that the latter

was more vulnerable to the effects of the AFC, than the former, and these series only reverts to their long-term trend around 2001-2002, following the financial turmoil in the US markets. During the growth period, from 2002 to 2007, total debt (TFD) and total equity (TFE) remained stable at 59% and 41%, respectively, of total investment. This suggests that both were affected in a similar way.[27] The period of growth was followed by a major but short-term decline, both in debt and equity flows, during the GFC of 2007–2009, and by the very end of this period, equity was affected more than debt, by almost 10% of the total investment.

It is evident, from Figures 5.1 and 5.2, that focusing only on total foreign inflows masks the behaviour of the disaggregated series. Therefore, in order to gain an in-depth understanding of the effects of A-IFRS on foreign investment inflows, it is essential to analyse the disaggregated foreign investment inflows, as well.

[27] Previous studies (e.g., Vermeulen & De Haan, 2014) use either a ratio, or net foreign investment to explain the behaviour of foreign capital flows. However, a comparison of Figures 5.1 and 5.2 reveals that the behaviour of TFE and TFD during the period 2002Q4 to 2007Q4 is obscured by netting one against the other. To avoid a loss of information, therefore, it is preferable to study the time sequences of the components, separately, as gross amounts.

Figure 5. 2: Total Foreign Debt and Total Foreign Equity as a Percentage of Total Foreign Investment, and the Growth rate



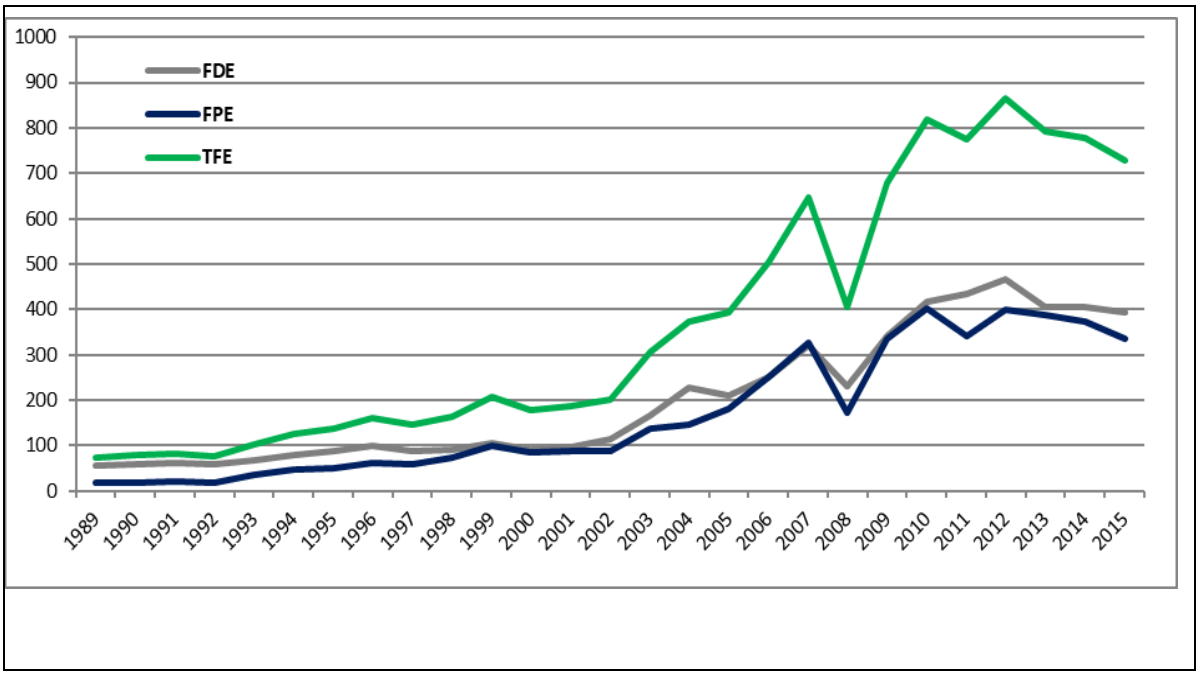
Source: calculated from IIP data.

Equity Investment

The behaviour of total equity (TFE), and its components, portfolio equity (FPE) and direct equity (FDE) are shown in Figure 5.3. There is a notable fluctuation in the performance of both components, with considerable growth after 2002, followed by a dip in 2008, due to the GFC. Another decline in the equity series, especially of FDE, can be observed around 2012.[28]

[28] This could be due to the decline in commodity-prices, after the boom of 2012 (see, https://www.rba.gov.au/speeches/2016/sp-ag-2016-09-13.html.

Figure 5. 3: Total Foreign Equity (TFI) Disaggregated as Foreign Direct Equity (FDE) and Foreign Portfolio Equity (FPE) in US$bn, 1989-2015

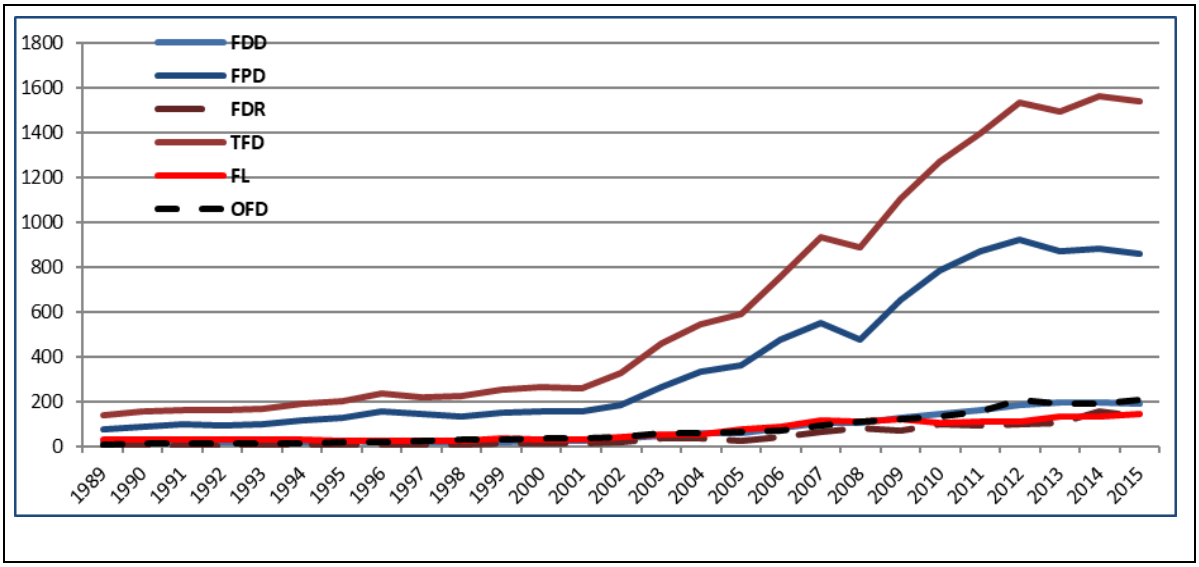


Source: calculated from IIP data.

Debt Investment

In Figure 5.4, total foreign debt (TFD) is made up of five distinct components: (1) direct debt (FDD), (2) portfolio debt (FPD), (3) derivative (FDR), (4) loans (FL) and (5) other debt (OFD). FPD constitutes the largest portion of TFD. After 2002, all components increased slightly. During the GFC period, FPD appears to be affected more than any other component. However, this effect was only short-lived, around 2008, after which it experienced a rapid increase in inflows.

Figure 5. 4: Total Foreign Debt (TFD) Disaggregated to Different Components in US$bn, 1989-2015



Source: Calculated from IIP data.

There is an interesting observation to be made from the above figures. As all the preceding figures are based on raw data, they can give a misleading impression of the growth of the various components of foreign investment inflow. This growth appears to be exponential, a basic feature of many economic time series. However, after the data is transformed into logs, the patterns of growth, in all the series appear to be nearly linear. For example, in Figure 5.5, the log-transformed data clearly depicts these patterns in TFI inflows as being almost linear.[29] Another notable feature of Figure 5.5 is that, from the end of 2002 through to the beginning of 2008, TFI grows at a greater rate than its long-run trend, which is a feature common to most of the component variables. This is consistent with the expectation that Australia's foreign investment inflows increased after the application of A-IFRS. The statistical tests, reported in Section 5.4 seek to confirm this expectation. However, because other contemporaneous events, such as the commodity-price boom,

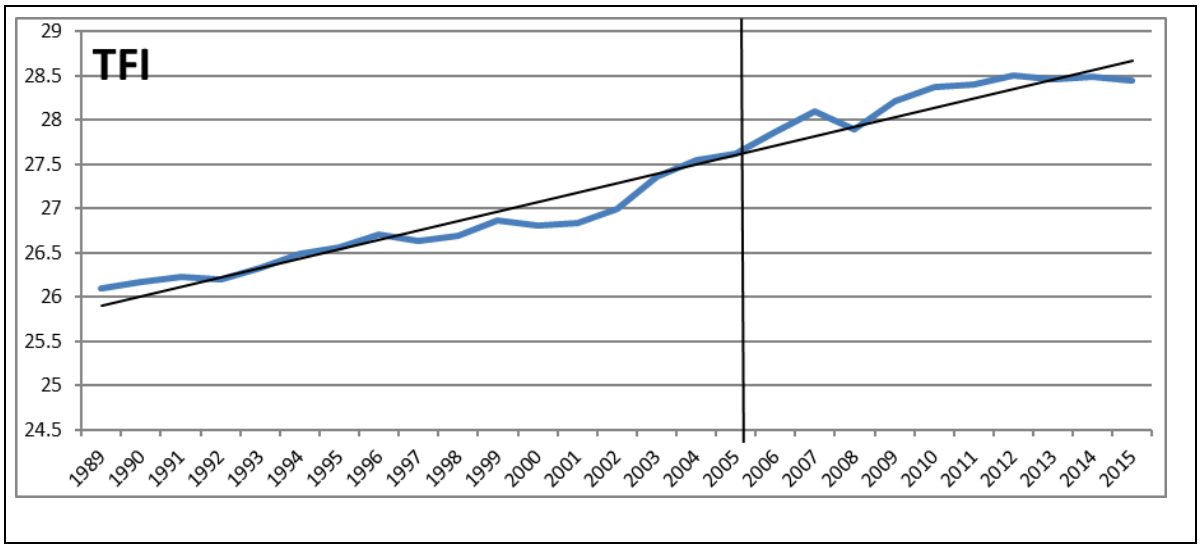
[29] See the graphs for the other variables, in Appendix B

which are detailed in Figure 4.2, occurred close to the A-IFRS event window (in 2003), they may provide an alternative explanation for the increase in Australia's foreign investment inflows at this time. In addition, as is evident in all figures, the financial crises that occurred during the period of the study also affected, to varying degrees, the behaviour of the individual components of foreign investment, an effect that, if ignored, could cause the results of the study to be biased.

Another interesting observation from the figures depicting raw and log data, is that after 2012, there is a significant change in the pattern of the time series. As this event is outside the period of interest to this thesis, and could potentially affect the outcome of the study, data from 2013 to 2015 are omitted from the tests.

It would seem that none of the time series under consideration are stationary in their raw form. However, Figure 5.5 suggests that the data fluctuate around a deterministic trend. Therefore, in the next section, in order to clarify the true behaviour of the data, application of a logarithm is followed by the traditional unit-root tests to determine whether the variables are stationary or non-stationary, with or without trend. This is a preliminary step to the empirical analysis of the structural break test.

Figure 5. 5: Time Sequences of the Total Foreign Investment Inflow, US$ bn, in Natural Logs, 1989 – 2015.



5.3 Stationarity and Unit Root Test

It is said that a time series is stationary if its mean, variance and auto-covariance are not dependent on time. Variables with means and variance that change over time, are known as non-stationary or unit-root variables (Glynn, Perera, & Verma, 2007). The unit-root test is particularly important in the present study, as it determines the type of structural-break method to use, in order to identify the date of the change in the time series. By including the trend in non-trending data, some of this change may be absorbed, producing spurious results (Piehl, Cooper, Braga, & Kennedy, 2003). Therefore, before testing for a structural break, it is essential to determine whether the data is stationary, with or without trend.

In this section, two sets of tests are applied. The first, which treats the *unit root* as the null hypothesis, includes both the Augmented Dickey-Fuller (ADF) and the Phillips and Perron (PP) unit root tests, while the second treats *stationarity* as the null hypothesis. This set includes The Kwiatkowski–Phillips–Schmidt–Shin (KPSS) test, which is used in this thesis.

Augmented Dickey-Fuller (ADF) and Phillips and Perron (PP) tests

The first to be applied are the ADF and PP tests. The PP statistics are non-parametric versions of the ADF statistics, so their asymptotic distribution remains unaffected by serial correlation (Bartholdy, Peare, & Willett, 2000). Two versions of each test are applied, where:

ADF models:

$$\Delta y_t = u + \alpha y_{t-1} + \sum_{i=1}^{l} c_i \, \Delta y_{t-i} + \varepsilon_t \qquad 5.1$$

$$\Delta y_t = u + \beta t + \alpha y_{t-1} + \sum_{i=1}^{l} c_i \, \Delta y_{t-i} + \varepsilon_t \qquad 5.2$$

PP models:

$$\Delta y_t = u + \ \alpha y_{t-1} + \varepsilon_t \qquad 5.3$$

$$\Delta y_t = u + \beta t + \ \alpha y_{t-1} + \varepsilon_t \qquad 5.4$$

In all, the null hypothesis is equivalent to:

H_0: $\alpha = 0$ (i.e., the data has a unit root)

The alternative hypothesis is:

H_1: $\alpha < 0$ (i.e., the data has no unit root)

where Δ is the first-difference operator, y_t is the foreign investment flow series, t is the time trend, and l is the number of lags to ensure that the error term, ε_t , is a white-noise disturbance and $t = 1 \ldots, T$ is the time period. Equations 5.1 and 5.3 include intercept(u), while equations 5.2 and 5.4 include intercept (u) and trend(t).

Table 5.2 shows the results for ADF and PP, for both the aggregated and disaggregated series, with intercept, and intercept and trend. For each test, columns 1 and 2 show the t-statistic value of the autoregressive coefficient (α), and column 3 shows the trend coefficient (β) (its t-statistic value is reported in parentheses). The null hypothesis of the *unit root* is rejected if the *t*-statistic for α is greater than the critical value (the critical values are provided in the footnote of Table 5.2). As expected, the results are mixed. The existence of a unit root is not rejected in any of the tests when only the intercept is included (Column 1 of each test). Although, when the trend (β) is included (Columns 3 of each test), the t-statistic values for the coefficient (α) are enhanced (Columns 2 of each test), the unit root hypothesis is only rejected for TFE and FDR under the ADF, and FDR and FPE under the PP test; however, it is only at the 10% level. All series (except FPD) show a significant positive trend at the 10% level or better, which supports the visual impression given by the graph in Figure 5.5.

Table 5. 2: Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) Unit Root Test Results

test		ADF			PP		
model		Intercept	Intercept and trend		Intercept	Intercept and trend	
Coefficients		α	α	β	α	α	B
Total Foreign Investment	TFI	1.1912	-1.66	0.0023* (1.9312)	0.4828	-1.88	0.0017* (1.8985)
Total Foreign Equity	TFE	0.3895	-3.20	0.0051*** (3.1910)	-0.278	-3.02	0.0043*** (2.7669)
Total Foreign Debt	TFD	1.2485	-1.31	0.0011* (1.6859)	1.1108	-1.39	0.0011* (1.6859)
Foreign Portfolio Equity	FPE	-0.888	-2.52	0.0091** (2.4304)	-0.832	-3.24	0.0058*** (2.770)
Foreign Direct Equity	FDE	0.330	-1.95	0.0023** (2.116)	0.0582	-2.16	0.0023** (2.218)
Foreign Direct Debt	FDD	1.3739	-1.25	0.00123** (1.9976)	1.5121	-1.20	0.00123** (1.998)
Foreign Portfolio Debt	FPD	0.3220	-1.49	0.0011 (1.6283)	0.6405	-1.49	0.0011 (1.525)
Foreign Loan	FL	-0.105	-1.50	0.00093* (1.65938)	-0.105	-1.50	0.0009* (1.659)
Foreign Derivative	FDR	-0.482	-3.24*	0.0140*** (3.225)	-0.473	-3.23*	0.0118*** (3.336)
Other Foreign Debt	OFD	1.4097	-2.36	0.0058** (2.567)	0.9716	-2.87	0.0052*** (3.0375)

Note:
Critical value; ADF = -3.500, -2.8922, -2.583192, PP = -3.5006, -2.8922, -2.583192 with intercept only, and ADF= -4.058, -3.458, -3.155, PP = -4.0576, -3. 457, -3.154 with intercept and trend, at 1%, 5%, and 10% levels, respectively.
***, **, * significant at the 1%, 5%, and 10% levels respectively.
In the ADF tests, in order to select the optimal lag length (l), the t test criterion approach is used. This involves starting with a pre-determined upper bound $l\ max$. If the last included lag is significant, $l\ max$ is chosen. However, if l is not significant, it is incrementally reduced by one lag at a time until the lags become significant. If no lags are significant, l is set at zero. The test is employed with l =11, which is ($N_i \times 12/100$), where N_i is the number of observations in each series. Also, a asymptotic critical value of approximately 5% is used to determine the significance of the t-statistic on the last lag (Perron, 1997).
In the PP tests, the Bartlett kernel estimation method is selected (default method), and to control the lag length, Andrew's Bandwidth is used.

There have been some criticisms of these two tests. For example, Kwiatkowski, Phillips, Schmidt, and Shin (1992) hold that the existence of a unit root is the null hypothesis of these tests, and in classical hypothesis testing, this null is accepted unless there are strong grounds for doing otherwise. Therefore, the ADF and PP tests are not regarded as being very powerful against the relevant alternative hypothesis. The mixed results, reported in Table 5.2 could reflect the problems identified by Perron (1989) and others. The ADF and PP tests have low power if the series is stationary with trend, and the existence of structural breaks in stationary data, which is expected to be the case for the foreign investment inflow series, can sometimes make a stationary time series appear non-stationary.

In contrast, the second set of tests for unit root, which includes the Kwiatkowski–Phillips–Schmidt–Shin (KPSS) test used in this thesis, is based on the null hypothesis that a series is stationary. Such tests are said to have more power than the ADF and PP tests to accept the stationarity with trend. Accordingly, the KPSS test is used to supplement the first set of tests.

Kwiatkowski–Phillips–Schmidt–Shin (KPSS) test

This set is usually used to test the null hypothesis of stationarity, versus non-stationarity, around the mean or trend (see Lee & Lee, 2012). The KPSS takes the following forms:

$$Y_t = u + \varphi_t + \varepsilon_t \qquad 5.5$$

$$Y_t = u + \beta t + \varphi_t + \varepsilon_t \qquad 5.6$$

Where ε is stationary and a random walk, i.e.:

$$\varphi_t = \varphi_{t-1} + \omega_t \qquad 5.7$$

The null hypothesis is $H_0 = \sigma_\omega^2 = 0,$ which implies that φ_t is constant.

Table 5.3 shows the results of the KPSS test. The null hypothesis of stationarity cannot be rejected if the *t*-statistic for φ is less than the critical value (the critical limits are shown in the footnote of Table 5.3). For intercept only (Column 1), the null hypothesis of stationarity is rejected; however, when the trend is included (Columns 2 and 3) as expected, the foreign investment inflow series appear to be stationary around the deterministic trend, with a significant positive trend.

The evidence obtained from the ADF, PP, and KPSS tests, along with the visual evidence provided in Figure 5.5, suggests that the data has trend. The mixed results concerning stationarity hint at the possibility of the series having one or more structural break. Therefore, in the following section, structural-breaks tests with trending data are used to investigate whether a break exists in Australia's foreign investment components, around the date on which A-IFRS was introduced.

Table 5. 3: Kwiatkowski–Phillips–Schmidt–Shin (KPSS)Unit Root Test Results

Model		intercept	Intercept and trend	
Coefficients		α	α	*B*
Total Foreign Investment	TFI	1.161	0.14	0.0274*** (43.90)
Total Foreign Equity	TFE	1.243	0.11	0.0278*** (48.97)
Total Foreign Debt	TFD	0.777	0.20	0.0271*** (37.591)
Foreign Portfolio Equity	FPE	0.591	0.08	0.035*** (50.22)
Foreign Direct Equity	FDE	2.959	0.13	0.023*** (35.76)
Foreign Direct Debt	FDD	0.533	0.21	0.0258*** (22.032)
Foreign Portfolio Debt	FPD	0.930	0.20	0.0272*** (37.868)
Foreign Loan	FL	1.868	0.159	0.0185*** (17.510)
Foreign Derivative	FDR	0.615	0.10	0.0429*** (38.172)
Other Foreign Debt	OFD	0.794	0.155	0.0318*** (65.181)
Critical value: 0.7390, 0.4630, 0.3470 with intercept only, and 0.216, 0.146, 0.119 with intercept and trend, at 1%, 5%, and 10% levels, respectively.				

5.4 Detecting the Structural Break Date

This section aims to investigate the question of whether Australia's foreign investment inflows increase after the application of A-IFRS. If there is an increase, a significant, positive break around 2005, is expected, in all or some of the components of Australia's foreign investment inflows series. To answer the above question, two structural break methods are used. Firstly, testing for an exogenous single break allows, in the most traditional way, to identify the effect of the change-over to A-IFRS. Here, the structural

break test is carried out using the pre-selected date of 2005Q3, when A-IFRS was formally implemented (See Section 4.4 and Figure 4.2 for more details). Secondly, testing for an endogenous break, this allows pinpointing the date of the break endogenously, that is, by allowing the break to be identified from the data, rather than using a pre-selected date. The benefits of endogenously identifying the break date are discussed in Section 4.4. Since the sample period of the study covers 24 years, more than one structural break is likely to occur; in view of this, the multiple endogenous break test is applied. This gives a broader view of the behaviour of foreign investment series, during the time of study. All the tests are univariate tests, where the only variables of interest are the shift in the intercept and the growth in the slope of the foreign investment inflows.

It is expected that evidence of the benefit of A-IFRS will appear at the time of A-IFRS application around 2005 as a positive structural break in the foreign investment inflow series. As discussed previously (See Section 4.4), due to transition and mandatory period, the effect of A-IFRS is expected to manifest itself within a wide range of possible dates. The selected A-IFRS event window extends from the third quarter of 2004 to the third quarter of 2007, so to be as agnostic as possible with regard to potential transition effects or implementation lags.

5.4.1 A Single Exogenous Structural Break

In Section 5.3, it was argued that the traditional unit-root test is biased against rejecting the unit-root hypothesis, when structural breaks are present (Edwards, 1995; Perron, 1989). Perron (1989) modified the DF unit root test to allow a structural break to be tested for using *a pre-selected date*. This involves estimating two groups of equations: the innovational outlier (IO) and the additive outlier (AO).

The IO allows for the change in the time series to be gradual. The first model, IO1, allows for the change in the intercept of the trend function:

$$y_t = u + \theta DU_t + \beta t + +dD(TB)_t + \ ay_{t-1} + \ \sum_{i=1}^{l} c_i \, \Delta y_{t-i} + \varepsilon_t \qquad 5.8$$

The second model (IO2) allows for the change in the trend only:

$$y_t = u + \beta t + \gamma DT_t + \ ay_{t-1} + \ \sum_{i=1}^{l} c_i \, \Delta y_{t-i} + \varepsilon_t \qquad 5.9$$

The third (IO3) is a comprehensive and less restrictive model that allows the change in the intercept and trend:

$$y_t = u + \theta DU_t + \beta t + \gamma DT_t + dD(TB)_t + \ ay_{t-1} + \sum_{i=1}^{l} c_i \, \Delta y_{t-i} + \varepsilon_t \qquad 5.10$$

where TB is the time break, DU_t is an intercept dummy that is set equal to 1 if $t > TB$ and to zero otherwise. DT_t is the trend dummy that is set equal to t if $t > TB$ and to zero otherwise, $D(TB)$=1 if t = $TB + 1$ and zero otherwise.

The AO allows for immediate change. The first model AO1 allows for the change in the level (intercept), while the second model, AO2, allows for the change in the trend only; the third model, A03, allows for the change to manifest itself, in both the intercept and trend:

$$AO1 \; y_t = u + \theta DU_t + \ \beta t + \bar{y}_t \qquad 5.11$$

$$AO2 \; y_t = u + \ \beta t + \ \gamma DT_t + \bar{y}_t \qquad 5.12$$

$$AO\,3 \; y_t = u + \theta DU_t + \ \beta t + \gamma DT_t + \bar{y}_t \qquad 5.13$$

where $\bar{y}_t$is the detrended series. In the next stage, the test is performed using the t-statistic for α =1 (unit root test):

$$\bar{y}_t = a\bar{y}_{t-1} + \sum_{i=1}^{l} c_i \, \Delta\bar{y}_{t-i} + \varepsilon_t \qquad 5.14$$

Since IO3 and AO3 are the most comprehensive and less restrictive models, they are used in the thesis to exogenously test for a structural break.

The single exogenous break (IO3 and AO3 models) test results

Table 5.4 presents the results for the aggregated data. If foreign investors were affected by A-IFRS application in 2005, then there should be a positive, structural break in one, or all, foreign investment components.

In Table 5.4, the results for the aggregated data (TFI, TFE and TFD) are reported; Panel A shows the IO3 results and Panel B shows the AO3 results. Column 1 reports the intercept (u); column 2, the shift in the intercept (θ); column 3, the trend coefficient (β); column 4, the growth in the trend (γ) and column 5, the autoregressive coefficient (α). The t-values for each of these coefficients are reported in parentheses.

The two main coefficients of interest are that of the post-intercept break dummy coefficient (θ), which reflects the shift in the intercept after 2005, and the post-trend break dummy coefficient (γ), which reflects the growth in the trend.

As expected, the results of *model IO3* (Panel A) shows that the shift in the intercept (θ) is statistically significant, and positive, for TFI and TFE. However, there is no significant effect on the slope (γ) after 2005. This may be due to the dynamics of the series (the auto-regressive coefficient) in the estimating equations. To remove the effect of this dynamics, *model AO3* is applied and the results are presented in Panel B. It shows that the shift in the intercept (θ) is significant and positive for all variables. For the growth in the slope (γ), the effect on this becomes significant and positive but the coefficient values are very small (γ=0.009). These results imply that, overall, there is evidence that Australian foreign

investment has a significant positive structural break around the date of A-IFRS application.

Table 5. 4: Innovational and Additive Outlier Model for determining the Break Date, in Intercept and Slope (IO3 & AO3), (Perron, 1989), for Total Foreign Investment Inflows as Aggregate.

Description	V.s	u	θ	β	γ	α
Panel (A)						
Total foreign investment	TFI	7.94** (2.288)	0.095** (2.166)	0.006** (2.533)	0.003 (1.184)	0.696 (-1.588)
Total foreign equity	TFE	6.879*** (4.098)	0.094** (2.286)	0.006*** (3.905)	-0.0001 (-0.082)	0.725* (-4.086)
Total foreign debt	TFD	1.231 (1.103)	0.033 (1.279)	0.001 (1.570)	-0.001 (-0.78)	0.952 (-1.096)
Panel (B)						
Total foreign investment	TFI	25.90*** (984.97)	0.34*** (7.26)	0.020*** (30.058)	0.009*** (4.042)	0.687 (-2.57)
Total foreign equity	TFE	24.89*** (770.54)	0.27*** (4.77)	0.023*** (28.086)	0.0024 (0.8530)	0.544 (-2.95)
Total foreign debt	TFD	25.5*** (939.20)	0.38*** (7.89)	0.018*** (26.582)	0.014*** (5.687)	0.924 (-1.66)

The assumption, here, is that there is a break under both the null and alternative hypothesis of unit root.
Break date selected: 2005Q3; λ= 0.698 (λ= Tb/T).
For the stationarity (α), the critical values for IO3, using Perron (1989), the asymptotic one-side p-values, are: -4.752708, -4.181250, and -3.861875, at the 1%, 5%, and 10% levels, respectively. For AO3, using Perron (1989), the asymptotic one-sided p-values are: -4.752708, -4.181250, and 3.861875. For DRA (76 observations), λ= 0.6133, the critical values are -4.862667, -4.232, and -3.938000, at the 1%, 5%, and 10% levels, respectively, for both models.
These tests were repeated using 2004Q3 and 2005 as the dates of the expected breaks. While the results of these were acceptable, using 2005Q3 provides a more reliable result.

Table 5.5 shows that, under the I*O3* model, the effect on TFE is mainly driven by direct equity (FDE), and there is no significant effect on portfolio equity (FPE). When the AO3 model is applied, the results are slightly different: while FDE has a significant positive structural break in both the intercept and slope, FPE shows a positive break in the intercept, and a significant negative break in the slope. These puzzling results for FPE

could be due to the presence of more than one break.

Table 5. 5: Innovational and Additive Outlier Model for determining the Break Date, in Intercept and Slope (IO3 & AO3), (Perron, 1989), for Foreign Equity Inflows as Disaggregates.

Description	V.s	u	θ	β	γ	α
Panel (A)						
Foreign portfolio equity	FPE	5.500*** (3.662)	0.063 (1.215)	0.008*** (3.412)	-0.004 (-1.406)	0.768 (-3.639)
Foreign direct equity	FDE	5.613*** (3.586)	0.085** (2.213)	0.004*** (3.355)	0.0017 (0.9171)	0.773 (-3.578)
Panel (B)						
Foreign portfolio equity	FPE	23.50*** (517.09)	0.19** (2.41)	0.035*** (29.84)	-0.011*** (-2.897)	0.736 (-2.26)
Foreign direct equity	FDE	24.62*** (761.35)	0.28*** (4.89)	0.017*** (20.5)	0.011*** (3.845)	0.629 (-2.8)

Table 5.6 (Panel A) shows that the results are not different when the TFD is disaggregated into its components. The results from model IO3 show no evidence of a structural break in 2005Q3. FL and OFD both show significant breaks in the slope; however, the effects are negligible (γ=-0.003 and 0.004, respectively). Replacing the estimation method by the AO3 model (in Panel B), more evidence is found. All debts, except OFD and FDR, have a significant positive structural break in the intercept (θ) and all, except FL and FDR, have a significant positive structural break in the slope. However, the growth in the slope is negligible, at approximately zero, which could be due to mis-specified break date or the existence of more than one break.

Table 5. 6: Innovational and Additive Outlier Model for Determining the Break Date, in both Intercept and Slope (IO3 & AO3), for Foreign Debt Inflows as Disaggregates.

Description	V.s	u	θ	β	γ	α
Panel (A)						
Foreign direct debt	FDD	0.692 (0.734)	0.018 (0.477)	0.001* (1.872)	-0.001 (-0.412)	0.970 (-0.745)
Foreign portfolio debt	FPD	2.258** (2.013)	0.044 (1.633)	0.002** (2.149)	0.0002 (0.198)	0.910 (-2.003)
Foreign loan	FL	1.337 (1.315)	0.063 (1.351)	0.001* (1.921)	-0.003* (-1.728)	0.943 (-1.325)
Foreign derivative	FDR	7.257*** (3.149)	0.065 (0.906)	0.014*** (3.114)	-0.002 (-0.522)	0.677 (-3.142)
Other foreign debt	OFD	7.113*** (3.604)	0.010 (0.324)	0.009*** (3.545)	0.004* (1.9680)	0.691 (-3.590)
Panel (B)						
Foreign direct debt	FDD	23.5*** (507.97)	0.57*** (6.83)	0.012*** (10.412)	0.024*** (5.853)	0.889 (-1.83)
Foreign portfolio debt	FPD	24.99*** (856.04)	0.37*** (7.09)	0.019*** (25.299)	0.013*** (5.0271)	0.904 (-2.17)
Foreign loan	FL	23.94*** (517.57)	0.74*** (8.980)	0.008*** (6.3327)	0.004 (0.990)	0.938 (-1.447)
Foreign derivative	FDR	22.41*** (356.51)	0.11 (1.08)	0.038*** (16.175)	0.0065 (1.3183)	0.646 (-3.455)
Other foreign debt	OFD	22.88*** (856.58)	0.00 (0.02)	0.028*** (41.086)	0.014*** (5.9355)	0.706 (-3.513)

The general conclusion that can be drawn from the results presented in this sub-section is that, apart from FDR, there are mixed results concerning the presence of a structural break, in both the debt and equity components of Australia's foreign investment inflow in 2005Q3. As mentioned earlier, using a *pre-selected/exogenously selected date* is not a particularly attractive method; however, it does provide a first-step preliminary break test analysis. Considering that there may have been implementation lags where the effects appeared later than predicted, or lead effects, which occurred during the transition-to-

implementation period before the standards were mandatory (e.g., Beneish et al., 2015), it is, therefore, necessary, now, to *endogenously* identify the structural break. This approach allows the researcher to decide whether the identified break is related to A-IFRS or to another event. In addition, given the long time series (24 years), the occurrence of more than one structural break is highly likely. Accordingly, in the following sub-sections, the *endogenous multiple- break* test is applied.

5.4.2 Multiple Endogenous Structural Break

The period of study is from 1989Q1–2012Q4. Therefore, the Bai and Perron (2003) multiple structural break test is applied to assess the effects of A-IFRS application on each of the foreign investment inflows. This provides a more detailed view of the behaviour of the various investment inflows around the time of A-IFRS. It will indicate if the timing and the effects vary across these series.[30]

Prior to carrying out the multiple structural break test, the single endogenous structural break test (Vogelsang & Perron, 1989) was used to identify the most important single structural break in the time series. The results are reported in Appendix C. Overall, there is weak evidence of a structural break within the A-IFRS event window; however, this was expected. As already mentioned, as the study covers 24 years, there is a high possibility that more than one important economic event could cause a break in the series (e.g., the AFC or GFC). Thus, there is the possibility that no evidence will be found of a single

[30] The multiple structural break test (Bai & Perron, 2003), assumes that there is no unit root in the data. This assumption of stationarity is based on studies by Ben-David and Papell (1998), which provide strong evidence in support of the rejection of the unit-root null hypothesis, in favour of a trend stationary with structural breaks. Likewise, many studies estimated a model where the coefficient of α is 0.93, 0.82, 0.89, and 0.82, namely $\alpha \neq 1$ (e.g., Lothian & Taylor, 1996; Prodan, 2008; Rudebusch, 1993).

structural break around 2005 using this method. Alternatively, even a single break was to be detected, the presence of any other major event might mask the true date of the effect of the A-IFRS, thereby turning what might otherwise be a strongly positive result, into a weak positive, or even a negative. These arguments provide support for the use of the Bai and Perron (2003) multiple structural break model for $m + 1$ regimes:

$$y_t = x_t'\beta + z_t'\delta_1 + u_t, \qquad t = 1, \dots, T_1,$$

$$y_t = x_t'\beta + z_t'\delta_2 + u_t, \qquad t = T_1 + 1, \dots, T_2,$$

$$\vdots \qquad\qquad \vdots$$

$$y_t = x_t'\beta + z_t'\delta_{m+1} + u_t, \qquad t = T_m + 1, \dots, T, \qquad 5.15$$

where y_t is the observed dependant variable at time t : in this thesis, this is the components of Australia's foreign inflows; x_t and z_t are the vectors of the regresses, while β and δ_j $(j = 1, \dots, m + 1)$ are the corresponding coefficients of vectors with $\delta_i \neq \delta_{i+1}$ $(i = 1, \dots, m)$. u_t is the disturbance term, at time t, while m is the number of structural breaks. The time breaks are $(T = T_1, \dots, T_m)$ treated as unknown (endogenously).

If all the coefficients in (5.15) are subject to change, then (5.15) becomes a pure structural change model and takes the following form

$$y_t = c_j + u_t \qquad 5.16$$

where $t = T_{j-1} + 1, \dots, T_j$, for $j = 1, \dots, m + 1$ with $T_0 = 1$.

Given that, I am interested in determining whether there is any break in the components of Australia's foreign investment inflows around the time of A-IFRS application, I assume a pure structural change model as described in (5.16) may not be suitable as all the series are trending. In place of this, the modified version of the Prodan (2008) model, which

assumes that all data are trending stationary, is applied. The modified structural change model is depicted by

$$y_t = c_j + \beta t + u_t \qquad 5.17$$

This is a partial structural model and can be described as pure trend model where the breaks are assumed to be in the constant while the trend (t) is estimated over the full sample. Three issues must be considered when estimating (5.17). Firstly, the need to pick the number of break points; since there are only 96 observations in the data series, a maximum of three breaks are allowed $(m = 3)$, and the data is trimmed by at least 20% of the observations as breaks are not expected to be detected at either end of the sample. Given that the data is trending, a trend component is added to obtain a trend stationary series. To measure the minimum structure, I follow Bai and Perron (2006) by allowing for heterogeneity and serial correlations of the errors in the different sub-samples.[31]

Multiple structure breaks are identified, by the BP test in a process consisting of two steps. The first involves testing for structural changes while, in the second step, the number of breaks is determined.

In the first step, the *UDmax* and *WDmax* statistics, double maximum tests are used to test the null hypothesis – that there is no structural break– against the alternative– that there are an unknown number of breaks. If the null hypothesis of no break is rejected by the double maximum tests, then the next step is to apply the sequential sup $F_T(l+1|l)$ procedure to determine the optimal number of structural breaks. This process is repeated by increasing l sequentially until the test sup $F_T(l+1|l)$ fails to reject the no additional structural change

[31] I did not include an AR process in (5.17) to control for serial correlation as Prodan (2008) finds that the pure model is more efficient than the partial trend model ($y_t = c_j + \beta t + py_{t-1} + u_t$) for detecting structural breaks.

hypothesis. The number of breaks selected is associated with the minimum error of squares, and sup F is the F test for each sub-sample. For example, the sup $F_T(l+1|l)$ test is not significant at the 5% level for any ($l \geq 2$) for TFI, indicating the presence of two breaks in the series. These tests are carried out on all components, aggregated and disaggregated, to determine the potential break points (T_β).

The multiple endogenous break (Bai & Perron, 2003) test results and discussion

Tables 5.7, 5.8, and 5.9 present the results of estimating the model for both aggregated and disaggregated foreign investment. As mentioned above, this model is a two-step process.

The first step is to test for the presence of at least one structural break, by applying the global test. The two general tests for the presence of a structural break, the UDmax and WDmax, provide evidence of at least one structural break in each series (Columns 1 and 2), at the 0.5% level of significance, or better. This is consistent with the findings of the earlier tests for a structural break. In Step 2, the sequential test is used to determine the optimal number of breaks when the Sup F (L+1/L) test is used to estimate the break dates (Columns 3 and 4). The findings of this step are significant at the 5% level, or better.[32] The findings of the BP test in the second step show that all variables, except OFD, have two or more structural breaks. Some of these occurred in 2005, a date close to those estimated by the previous tests.

In Table 5.7, both 1997Q4 and *2004Q4* are shown as break dates for TFI. The latter, which shows an increase in TFI, is within the A-IFRS event window. The former, which shows a decrease in TFI, falls within the AFC of 1997-1998. TFE also has two structural breaks: the first, which is negative, occurred in 2000Q1, and the second, which is positive, in

[32] Appendix D provides more detail regarding the results of the Bai and Perron (2003) test.

2004Q4. Similarly, TFD has two break dates, one in 1997Q2 and the other in *2004Q4*. Overall, in all cases, the second break date appears to be in *2004Q4*. This is within the window of when AASB 132 and AASB 139 were first used, and also of the introduction of AASB 1 and AASB 1047, both of which required greater disclosure of an entity's financial position and operating results in its annual and mid-year report, in 2004 (See Section 4.4). This suggests that the use of A-IFRS, by providing foreign investors with relevant, reliable, and more comparable financial information (Wang & Welker, 2011), may have encouraged foreign investors to invest in both debt and equity in Australia. However, because each of the disaggregated foreign investment components may have reacted differently to A-IFRS, the structural break date that was identified using aggregated data could be due to the dominance of only one or two components of foreign investment flow. Accordingly, the next step was to disaggregate the equity and debt components of the foreign investment.

Table 5. 7 : Results of the Multiple Structural Break Test for Total Foreign Investment Inflows as Aggregates

V.s	Step 1(double maximum tests)		Step 2 (break dates selected)			
	UDmax	WDmax	Sup F (1/0)	Sup F (2/1)	TB1	TB2
TFI	67.171	108.690	123.677	36.661	-1997Q4	+2004Q4
TFE	47.500	47.500	47.500	16.733	-2000Q1	+2004Q4
TFD	128.652	208.173	143.592	29.640	-1997Q2	+2004Q4

Note 1: The critical values for Sup $F_T(k)$ for $k = 1, \ldots, 3$ are 8.22, 6.53 and 5.08 respectively; and for UDmax, and WDmax are 8.43 and 9.27 respectively. All tests are significant at 5% or better.
Note 2: When I re-estimate, using a maximum break = 5, all variables appear to have a structural break around the A-IFRS window.

In terms of disaggregated equity, the test results in Table 5.8 indicate two breaks in FPE, one of which occurs in *2005Q3*, the date of the first half-year reporting that was prepared

using A-IFRS. This report was expected to reduce information asymmetry (Wang & Welker, 2011). In addition, there is evidence that FPE has a break in 1993Q4, the period of GFL. The appearance of such a break provides robustness to the results obtained using the Bai and Perron (2003) test. This result is consistent with the visual impression in Figure 5.3. FDE has two structural breaks, in 1997Q4 and *2003Q4*. The second of these is positive; however, as it falls within the year that marked Australia's commodity-price boom (2003), a plausible explanation is that the effect on FDE is driven more by this event than the introduction of A-IFRS. However, to reach a definite conclusion concerning the source of the effect, the commodity-price boom and other economic events need to be controlled for; this is done in Chapter 6.

Table 5. 8: Results of the Multiple Structural Break Test for Foreign Equity Inflows as Disaggregates

V.s	Step 1(double maximum tests)		Step 2 (break dates selected)			
	UDmax	WDmax	Sup F (1/0)	Sup F (2/1)	TB1	TB2
FPE	37.523	54.327	37.523	24.458	+1993Q4	+2005Q3
FDE	69.181	90.847	92.786	40.961	-1997Q4	+2003Q4

For disaggregate debt, the results, in Row 1 of Table 5.9 show that FDD has a positive structural break in *2006Q4*. This result indicates that after the application of A-IFRS MNCs encouraged foreign affiliates to invest in their Australian partners, which may imply tax purposes. This date of the break is consistent with the findings of De Simone (2016), which suggests that affiliates need time to adjust to the shift in profit following their move to A-IFRS. Interestingly, FDD also has a positive structural break in 2001, a date that is close to that of the implementation of the GST in Australia in 2000. This could also support the argument advanced in Chapter 4, that FDD is affected by the tax system. Further investigation of this is conducted in Chapter 6.

The second of the TDF disaggregated components is FPD which, as a public debt, is the most significant source of Australia's foreign debt (See Appendix A). This was expected to increase significantly after the application of A-IFRS. FPD has two break dates: one in 1998Q1 and the other in *2004Q3*. The latter is close to the date of the structural break in TFD. This structural break in *2004Q3*, confirmed this expectation as it is within the implementation of AASB 1, AASB 1047, AASB 139, and AASB 132. These standards, with great disclosure and the use of fair value under A-IFRS, may have provided foreign investors with more relevant and reliable information concerning the future cash flow of their investments, thereby enabling them to more accurately estimate the quality of their investments (e.g., Florou & Kosi, 2015; Taylor et al., 2010).

The third component of debt is FL. According to previous studies, financial reporting plays a significant role in decision-making by banks. Thus, it was expected that FL would increase significantly after A-IFRS was introduced. The results showed a significant break in FL, in *2005Q3*, a date that falls within the A-IFRS event window. This coincided with the date of the structural break in FPE; therefore, the same explanation, that public accounting information plays an important role in reducing information asymmetry, may also apply here. This finding is consistent with those of Brown (2014), Florou and Kosi (2015), and Kim et al. (2011).

FDR indicated the presence of a non-significant structural break in *2005Q3*, a date that was determined exogenously; however, when it was tested endogenously, two significant structural breaks were indicated. The first of these falls in 2002Q4, that is, within the timeframe of the government's announcement of its intention to implement A-IFRS. The second is in *2007Q2*. This is close to the break date of *2007Q1*, which was identified under the single endogenous structural break test (See Appendix C), and both close to the date of

the implementation of AASB 7. This result suggests that FDR may be sensitive to the requirement of AASB 7, for increased disclosure regarding risk, especially that related to the use of derivatives, such as commodity risk, exchange risk, and so on (e.g., Birt et al, 2013; Taylor & Tower, 2011). This extra information may enhance the investment decisions of foreign investors, thereby making them more confident investing in derivatives. Alternatively, the structural break could be due to the effect of the GFC: the greater uncertainty and higher risk during this crisis, drove foreign investors to invest in FDR. In Chapter 6, after the commodity price risk, credit risk, and exchange rate risk are controlled for, this will be investigated further.

OFD is also positively affected in *2007Q3*, that is, within the A-IFRS event window. This result is consistent with the suggestion of Hail et al. (2010) and the finding of Li et al. (2017), that firms that prepare their financial reporting under IFRS have more efficient contracts with suppliers. However, it is not clear why OFD shows a lag effect. Previous studies do mention that other foreign debt providers have the ability to access insider information (Love, 2011), which means it should not be overly affected by the increased disclosure concerning risk under AASB 7. An alternative explanation is that the GFC may have pushed providers of other foreign debt to support their Australian customers experiencing financial difficulties by providing them with more goods and services on credit, or short-term debt (e.g., Love, 2011). Further investigation of this is conducted in Chapter 6.

Table 5. 9: Results of the Multiple Structural Break Test for Foreign Debt Inflows as Disaggregates

V.s	Step 1(double maximum tests)		Step 2 (break dates selected)					
	UDmax	WDmax	Sup F (1/0)	Sup F (2/1)	Sup F (3/2)	TB1	TB2	TB3
FDD	121.21	184.37	125.83	43.545	28.51	-1996Q4	+2001Q4	+2006Q4
FPD	123.50	199.83	126.82	72.446		-1998Q1	+2004Q3	
FL	148.43	212.46	136.92	67.109	14.52	-1995Q1	+1999Q4	+2005Q3
FDR	71.268	89.713	39.80	50.90		+2002Q4	+2007Q2	
OFD	24.512	39.663	50.131			+2007Q3		

Overall, up to this stage of the investigation, there is sufficient evidence to support the notion that the flow of foreign investment into Australia increased significantly, following the implementation of A-IFRS. The above results reveal some variations in the break dates indicated in the disaggregated foreign investment inflow variables. In some flow variables such as FPE and FL, the break date was around 2005Q3, while in others, such as FDD, FDR and OFD the break appeared with a lag, the effects of A-IFRS having been felt more than a year after the official implementation of A-IFRS. FPD was the only disaggregated variable with a lead effect, while FDE remained unaffected by A-FIRS. In general, since all these breaks occurred *around 2005,* and, therefore, within the A-IFRS event window of 2004Q3–2007Q3, they are consistent with the effect of the introduction of A-IFRS. The different break dates suggest that the nature and degree of the effects of A-IFRS varied according to the type of flow component. These outcomes are consistent with the theoretical frameworks described by Razin et al. (1998) and others (See Chapters 3 and 4).

In the present study, the Bai and Perron (2003) multiple-structural-break test plays an important role, because it identifies the effect of A-IFRS on foreign investment, after other events are controlled for. For instance, it identifies breaks, which, in most cases, coincide

with the occurrence of a historical event or financial crisis (e.g., 1993Q4 is the date of Global Financial Liberalisation, and is also close to the period of the Mexican Debt Crisis of 1994–1995, while 1997Q3 is around the time of the Asian Financial Crisis of 1997–1998).[33]

Overall, these results confirm the prediction that foreign investment inflows have a positive structural break around 2005, close to the date of the introduction of A-IFRS. This can be interpreted as support for the study's prediction that Australia's foreign investment inflows increased after the entities were required to use A-IFRS.

5.4.5 Robustness Test

To add robustness to the above findings, the Lee and Strazicich (2003) test is used. This test identifies breaks occurring under both the null and alternative hypotheses of unit root. The method and the results of this test are shown in Appendix E. Model C of the Two-Break Minimum LM Unit-Root Test (2003), which allows for changes in the intercept and trend, is applied, in this thesis

The results indicate that although the Lee and Strazicich (2003) test differs from that of the Bai and Perron, (2003), both identify, approximately, the same break date for each of the variables, one that falls within the A-IFRS event window. The only exception is FL, which has no break within this window under Lee and Strazicich (2013); however, the two breaks that are indicated, in 1993Q2 and 2000Q4, are close to those, in 1995Q1 and 1999Q4, that are indicated by the Bai and Perron (2003) test. Moreover, the Bai and Perron test

[33] There is no clear evidence that the Mexican debt crisis in 1994-1995 affected Australia foreign investment inflows; however, there is evidence that it had a significant effect on many other countries that have an important partnership with Australia, such as US (e.g., Musacchio, 2012). This might have affected the level of foreign investment that Australia received from such countries.

pinpoints yet another structural break in 2005Q3, a date within the A-IFRS event window. This provides further support for the use of the Bai and Perron (2003) multiple-structural-break test.

5.5 Conclusion

This chapter aimed to identify a structural break in each of the various components of Australia's foreign investment inflows, to see if there was any positive structural break, around 2005, the year of A-IFRS implementation. Identifying this break date is central to the present study, since it is crucial to answering the question of whether this event was associated with an increase in foreign investment due to the capacity of the global standards to reduce the informational disadvantage of foreign investors, relative to their local counterparts.

Evidence of an increase in Australia's foreign investment inflow, was obtained using time series from 1989Q1 to 2012Q4 coupled with a range of structural break methodologies, i.e., exogenous and endogenous structural break tests. Firstly, a single exogenously detected structural break test (innovational outlier (IO) and additive outlier (AO)) was carried out and mixed results of significant increases after 2005Q3 were found. The mixed outcome could be attributed to lead or lag effects of A-IFRS. In the next step, a structural break test that identified the break date endogenously was used. Since the time series covers a lengthy period of close to 24 years, it was anticipated that there could be more than one break (See Figure 4.2). Therefore, the Bai and Perron (2003) endogenous multiple structural break test was applied. Overall, the findings reported in Table 5.10 indicate a significant structural break around the date of A-IFRS application, in all Australian foreign investment inflows, except FDE. These findings are further supported

by the application of a robustness test, the Lee and Strazicich (2003) test, with two structural breaks.

Table 5. 10: Structural Breaks Dates (Bai & Perron (2003) test)

Breaks	TFI	TFE	TFD	FPE	FDE	FDD	FPD	FL	FDR	OFD
Break 1	1997Q4	2000Q1	1997Q2	1993Q4	1997Q4	1996Q4	1998Q4	1995Q1	2002Q4	2007Q3
Break 2	2004Q4	2004Q4	2004Q4	2005Q3	2003Q4	2001Q4	2004Q3	1999Q4	2007Q2	
Break 3						2006Q4		2005Q3		

Overall, in keeping with the literature, the results of the structural break tests reported in this chapter confirm the prediction that foreign investment inflows significantly increased after the application of A-IFRS; the only exception to this is FDE, break date for which fell outside the A-IFRS event window. Furthermore, the consistency of the results for all the other components of foreign investment provides further support for the above prediction. The results show that some components had a significant break in 2005 (PEL and FL); others showed the effect with a lead (FPD), while the remainders registered the break with a lag (FDD, FDR, and OFD). This support the argument that different component may react differently to the reduction in information asymmetry (Razin et al., 1998). In general, since all of these break dates were around 2005, they were consistent with the expected effects of the introduction, under A-IFRS of a high-quality financial reporting regime with greater comparability. This conclusion is consistent with both the broad picture that emerged from the literature review in Chapter 3 and the visual impression conveyed by the sequence plots presented in Section 5.2. However, before accepting such a definitive conclusion, further tests are required to indicate whether the results could possibly have been affected by other economic events. Chapter 6, therefore, will explain the empirical method involved in these tests and, then, report the results with the discussion.

CHAPTER 6: Autoregressive Distributed Lag (ARDL) Approach and the A-IFRS

6.1 Introduction

This thesis argues that the application of A-IFRS attracts more foreign investment to a country, as by increasing familiarity with accounting standards, it reduces the information disadvantage faced by foreign investors. The exogenous and endogenous structural-break results obtained in Chapter 5 highlight the existence of a positive structural break within the A-IFRS window, which may be associated with the introduction of A-IFRS. However, it is important to note that any break detected within the specified window can only be attributed indirectly to A-IFRS.

The exogenous- and endogenous structural-break tests are univariate approaches, whereby any break identified within the A-IFRS event window could also be associated with any of the other economic events that occurred around the time of A-IFRS application. For example, as mentioned in Section 4.4, an increase in capital inflows around 2003–2004 could be due to the commodity-price boom experienced by Australia at that time.

In this Chapter, I use the Autoregressive Distributed Lag (ARDL) model developed by Pesaran and Shin (1998), which controls for other possible events by including the macroeconomic variables described in Table 6.2. The ARDL model also allows us to capture both the long-run and short-run effects of A-IFRS application. This is important to the study, as Bruggemann et al (2013), Callao et al. (2007), Daske et al. (2008), and Dunstan (2003) suggest that a country with a relatively long experience of the international standards and a high level of enforcement might experience greater benefits of IFRS in the long-run, along with the short-run effects. Therefore, the use of the ARDL model in

international accounting studies may allay some of the concerns raised by previous studies. For example, studies using a pre-selected date and short sample series have stressed that the benefits of IFRS are only experienced by countries whose domestic GAAP standards differed significantly from IFRS (e.g., Gordon et al., 2012). To the best of the knowledge, to date, there has been no empirical study that has used the ARDL framework to analyse the effect of A-IFRS application on foreign investment flows.

The structure of this chapter is as follows. Section 6.2 presents a brief analytical review of the ARDL model and the choice of macroeconomic control variables, as well as the model specification that is used in this chapter. Then, in Section 6.3, based on the results of the bound test, the error correction version of the ARDL model is applied in order to determine the long- and short-run coefficients, both for the aggregated and disaggregated components of foreign investment. Finally, a conclusion is presented in Section 6.4.

6.2 Autoregressive Distributed Lag (ARDL) Model

The results from Chapter 5, which are reported in Table 6.1, show that all variables, with the exception of OFD, have two or more structural breaks, at least one of which appears to have occurred within the A-IFRS event window (the only exception is FDE). This reinforces the notion that the application of A-IFRS accounting standards affects foreign investment decision-making (the economic consequences of accounting information, as mentioned in Zeff (1978). However, before such a definitive conclusion can be accepted, other economic events that occurred around the same time as A-IFRS application need to be controlled for. This is done by applying the ARDL model, developed by Pesaran and Shin (1998).

Table 6. 1: Structural Breaks Dates (Bai & Perron (2003) test)

Breaks	TFI	TFE	TFD	FPE	FDE	FDD	FPD	FL	FDR	OFD
Break 1	1997Q4	2000Q1	1997Q2	1993Q4	1997Q4	1996Q4	1998Q4	1995Q1	2002Q4	2007Q3
Break 2	2004Q4	2004Q4	2004Q4	2005Q3	2003Q4	2001Q4	2004Q3	1999Q4	2007Q2	
Break 3						2006Q4		2005Q3		

6.2.1 Benefits of Using ARDL Framework

According to Pesaran, Shin, and Smith (2001), the ARDL model has a number of advantages. It is applicable irrespective of whether the flow variables are stationary or non-stationary and the pre-testing problems associated with the standard co-integration techniques can be avoided.[34] It performs well on a small number of observations, and thus is well suited to this thesis, which there are only 96 observations. The dynamic error-correction model derived from the ARDL integrates the short-run dynamics with the long-run relationship without loss of information. This is important for this thesis, as it allows both the short- and long-run effects of A-IFRS application to be captured. In fact, this can also be achieved using a number of other economic models, of which the Engle-Granger (1987) and the Johansen and Juselius (1990) are just two examples. However, because of the low power and other problems associated with such models, especially in the presence of a structural break, the ARDL model is the popular choice of more recent time-series studies (e.g. Awan, Anjum, & Rahim, 2015; Pahlavani, 2005; Verma, 2008).

6.2.2 ARDL Model Specification

The ARDL model has two steps. The first involves the use of the bound test to investigate the long-run effect of A-IFRS application, while in the second, the coefficients of both its

[34] The assumption, here, is that foreign investment variables are stationary, with multiple structural breaks (See Chapter 5).

long- and short-run effects are estimated using the error-correction version of the ARDL model. According to Pesaran et al. (2001), the augmented ARDL is given by the following equation:

$$y_t = a_0 + \delta_0 t + \sum_{j=1}^{p} \alpha_j y_{t-j} - \sum_{i=1}^{k} \sum_{j=0}^{q_i} \beta_{ij} x_{i,t-j} + \sum_{i=1}^{m} \delta_i Di + \omega_t \quad 6.1$$

where y_t is the dependent variable described in Table 1, a_0 is the constant term, t is the time trend, x_i is the control variable i, described in Table 6.2, while Di is the identified endogenous break dummies i reported in Table 6.1. Here, δ_0, α_j, a_j, β_{ij} , and δ_i are the estimated coefficients. m is the selected number of endogenous breaks for each dependent variable, while k is number of control variables. p is the selected number of lags of the dependent variable, while q_i is the selected number of lags of each control variable.

As a first step, the F test is used to test for the existence of a long-run relationship between Australian foreign investments components with the control and deterministic terms in equation (6.1). If the F-statistic is greater than the upper bound critical value, the null hypothesis of the existence of no long-run relationship will be rejected. On the other hand, if the F-statistic is lower than the critical values, this means that there is no long-run relationship. If, however, it falls between the lower and upper critical values, the result is inconclusive. In all cases, in keeping with the study by Kremers, Ericsson, and Dolado (1992), it is also useful to use error-correction terms (ECT) to establish a long-run relationship.

$$\mathrm{B}_i = \frac{\beta_{i0} - \beta_{i1} \ldots - \beta_{i\hat{q}}}{1 - \alpha_1 - \alpha_2 \ldots - \alpha_{\hat{p}}} \text{ where } i = 1, 2 \ldots k$$

Similarly, the long-run coefficients for a response of y_t to the structural break D_i are estimated by:

$C_i = \frac{\delta_i}{1 - \alpha_1 - \alpha_2 \ldots - \alpha_{\hat{p}}}$ where $i = 1, 2 \ldots m$

Consequently, the long-run equation can be written as follows:

$$y_t = C_0 t + \sum_{i=1}^{k} B_i x_{it} + \sum_{i-1}^{m} C_i D_i + e_t \quad 6.2$$

Here C_0, B_i *and* C_i are the long run coefficients.

The error correction term (ECT) is defined as:

$$ECT_t = y_t - C_0 t - \sum_{i=1}^{k} B_i x_{it} - \sum_{i-1}^{m} C_i D_i \quad 6.3$$

Then, the short-run equation can be written as:

$$\Delta y_t = \hat{a} + \sum_{j=1}^{p} \gamma_j \Delta y_{t-j} - \sum_{i=1}^{k} \sum_{j=0}^{qi} \theta_{ij} \Delta x_{i,t-j} + \sum_{i=1}^{m} \phi_i Di + \lambda ECT_{t-1} + \mu_t \quad 6.4$$

Δ is the first differences operator while $\hat{a}, \gamma_j, \theta_{ij}, and\ \phi_i$ are the coefficients relating to the short-run dynamics of the model's convergence to equilibrium and λ measures the speed of adjustment towards long run equilibrium. If λ is negative and significant, this indicates the existence of a stable long-run relationship between the dependent and regressor variables.

Of the structural breaks (Di), the focus of this thesis is the dummy variable related to A-IFRS application *(DA-IFRS).* This takes the value of 1 during and after the break, and zero otherwise. The expectation is that, if the application does attract an increased amount of foreign investment, the coefficients of *DA-IFRS* in the long- and short-run will be significantly positive.

6.2.3 Choice of Macroeconomic Control Variables

One of the major economic events, in Australia, that occurred within the A-IFRS event window is the turnaround in the mining sector. This raises the possibility of whether the

magnitude of the changes observed in the foreign inflow variables could be due to this commodity-price boom, rather than A-IFRS application. According to Connolly and Orsmond (2011) and Kearns and Lowe (2011), the effects of this event are experienced as increased growth, rising interest rates, improved terms of trade, and the appreciation of the Australian dollar. To control for these effects, I added to the ARDL model the following variables, one at a time: RGDP, TOT, OPEN, EXCH, and INT. The variables I chose, their definitions, and my rationale for including them in the ARDL framework are described in detail in Table 6.2.

Table 6. 2: Control Variables

Control V.s	Definitions	Reason
RGDP	The log of real gross domestic product as a measurement of real income	To control for the market size that attracts foreign investment due to commodity-price boom. It is expected that increased RGDP leads to increased foreign investment inflows (See Beneish et al., 2015; Louis & Urcan, 2014; Chen et al., 2014; Gordon et al., 2012; Márquez-Ramos, 2011; Akisik & Pfeiffer., 2009).
TOT	The Terms of trade refers to the physical exchange ratio at which goods are exchanged for one another between the countries. It is calculated as export price index/import price index.	To control for the effect of the commodity-price boom on foreign investment mobility. It is expected that increased TOT leads to increased foreign investment mobility (See Downes, Hanslow, & Tulip, 2014).
OPEN	Absolute value of exports, plus imports, as a percentage of RGDP.	To control for the investment climate that attracts foreign investment. It measures the openness of the economy. It is expected that increased OPEN leads to increased foreign investment mobility (See Gordon et al, 2012; Akisik & Pfeiffer, 2009).
EXCH	The real effective exchange rate, based on Consumer Price Index	To control for changes in the Australian currency. It is expected that when the real exchange rate appreciates, it attracts foreign flows (See: Beneish et al., 2015; Louis & Urcan, 2014).
INT	The lending rate is the bank rate that meets the financing needs.	To control for the level of interest rates. It is expected that when the interest rate increases, it attracts foreign savings (See: Beneish et al., 2015; Louis & Urcan, 2014 for details).

Sources of data - International Financial Statistics (IFS). http://data.imf.org/?sk=4C514D48-B6BA-49ED-8AB9-52B0C1A0179B&sId=1409151240976.

6.3 Results of the ARDL Model and Discussion

Since there are only 96 observations, the maximum lags of two are chosen for p and q_i. Each of the flow variables is estimated five times, using the different control variables described in Table 6.2. These variables are expected to control for any major economic events that might have an impact on the flow variables. For example, the RGDP, TOT and OPEN describe Australia's investment climate and increases in the size of these variables are expected to attract more foreign investment inflows. On the other hand, increases in EXCH and INT are expected to attract more foreign savings flows, which, in turn increases foreign investment flows. These models are then run once again, this time including RGDP, as an original variable, along with one of the other control variables. This second set of estimations, the results of which are reported in Appendix H, provides a further robustness check. Each model includes intercept, trend, and the structural breaks identified through the Bai and Perron (2003) test. As mentioned earlier, the coefficient of interest, both in the long and short run, is the one that reflects the effect of A-IFRS application on foreign investment variables, that is, *DA-IFRS*.

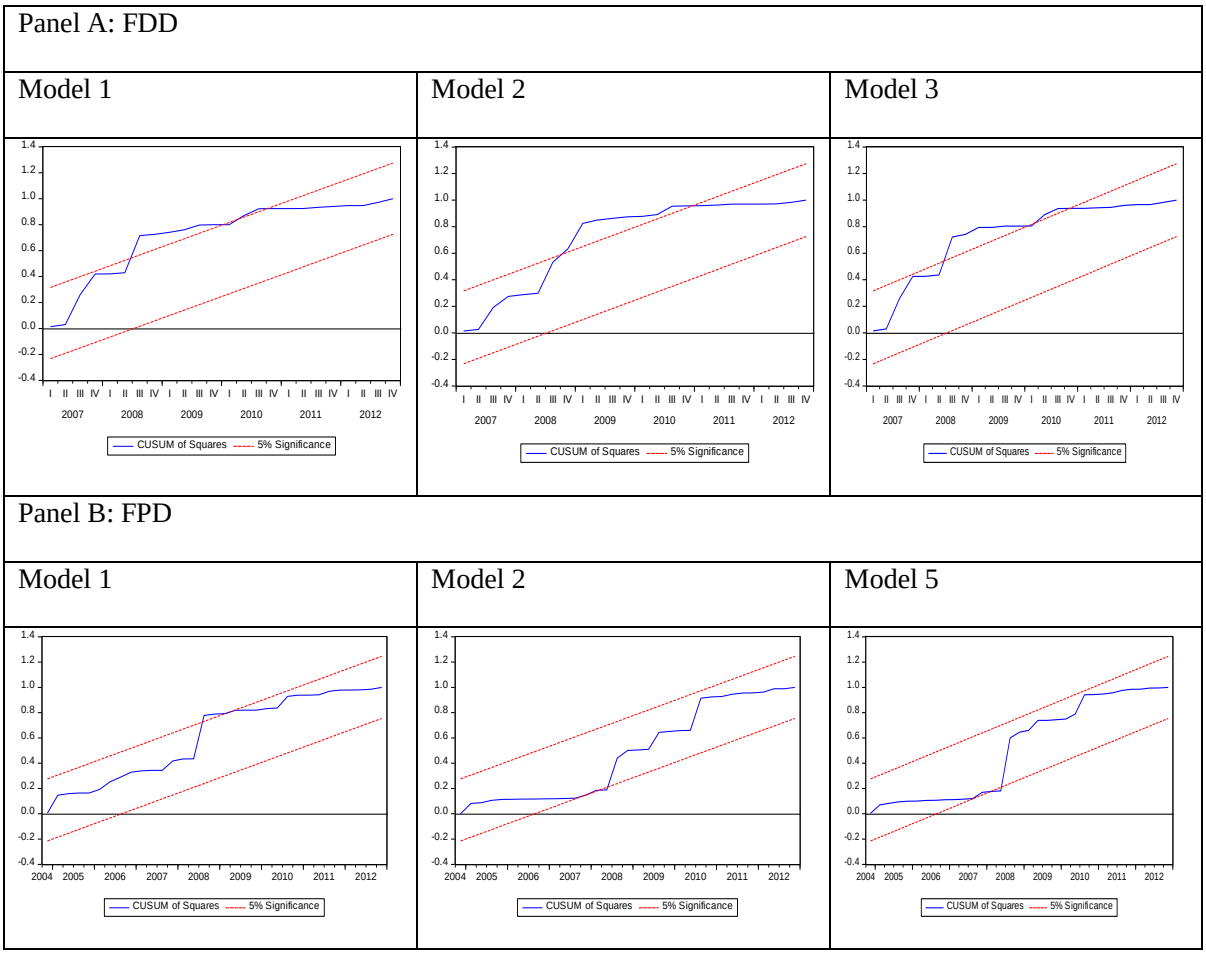
Diagnostic and stability tests are then conducted to ascertain the appropriateness of the ARDL model (See Appendix F). The model passes the tests for serial correlation and heteroscedasticity. The stability of the long-run coefficients is evaluated, using the cumulative sum (CUSUM) and the cumulative sum of squares (CUSUMQ). For most flow variables, the plots fall within the boundaries, (See Appendix G). However, those for FDD and FPD cross the critical-value line. In both of these variables, a structural break is identified around 2008, the date associated with GFC (See Figure 6.1), making it difficult to assess the effects of A-IFRS. To avoid such a problem, the observations from 2008Q3

to 2009Q2 have been dropped from the A-IFRS dummy variable for these two flow variables.

The F-statistic for the bound test is reported in the second row of each table. With the exception of FL for all other foreign flow variables, the null hypothesis of no long-run relationship is rejected, indicating a stable long-run relationship between foreign investments and the control and deterministic terms. The next step is to estimate the long- and short-run coefficients of the ARDL model with two fixed lags.[35] The short-run coefficient is used to test for the short-run effects of A-IFRS application and other control variables on foreign investment, while the long-run coefficient allows the long-run effect to be ascertained. A full set of the results for both of these coefficients is provided in Appendix H. The main focus here is to determine whether the *DA-IFRS* and ECT coefficients are significant, as this is crucial to the present study. The statistically significant, positive coefficients of the *DA-IFRS*, both in the short- and the long-run, provide evidence of the increased usefulness of financial statements for investor decision-making, post-adoption.

[35] As there are 96 observations, the fixed lags of two are chosen.

Figure 6. 1: CUSUMQ test for FDD and FPD (examples)



Total Foreign Investment (TFI)

Table 6.3 reports the results for TFI. The ECT coefficient has the correct sign and is statistically significant, an indication that deviations from the long-run are corrected around 11% to 23% in the next period, which shows a relatively slow pace of adjustment back to equilibrium. The statistically significant positive coefficients of *DA-IFRS* in the short-run around 13-14 % provide evidence of the increased usefulness of financial statements for investor decision-making, after A-IFRS-adoption.

Table 6. 3: Total Foreign Investment (TFI)

Control variables included in each model	Model 1 RGDP	Model 2 TOT	Model 3 OPEN	Model 4 EXCH	Model 5 INT
Bound test	6.47**	2.33	6.56**	4.19	4.35
Short Run Coefficients					
DA-IFRS	0.14*** (4.07)	0.14*** (2.82)	0.13*** (3.02)	0.13*** (3.13)	0.14*** (2.87)
ECT (-1)	-0.21*** (-3.37)	-0.11*** (-2.64)	-0.17*** (-3.97)	-0.17*** (-2.87)	-0.23*** (-3.55)
Long Run Coefficients					
DA-IFRS	0.40*** (2.92)	0.44 (1.29)	0.28* (1.69)	0.42** (2.09)	0.14 (0.99)
$R^{\wedge 2}$	0.998253	0.996168	0.996968	0.997608	0.996126
F test	6072.771	2762.036	3493.173	4431.444	2732.364

Notes: 1. ***, **, * coefficient is significant at the 0.01, 0.05, and 0.10 level, respectively.
2. The critical values for the regressions are 6.1, 4.68, and 4.05 (lower bound) and 6.73, 5.15, and 4.49 (upper bound) for 0.01, 0.05, and 0.10 levels of significance respectively.
3. *DA-IFRS* is the dummy variable representing the A-IFRS application
4.ECT(-1) is the error correction term to measure the existence of the long-run relationship between the dependent variable and the regressors.
5- For more robustness, Model 2 (and 6 in Appendix H.1), for all foreign investment components, have been re-estimated, using *the bulk commodity-price* to control for commodity-price boom, instead of TOT. Overall, the results yield similar conclusions to those from the TOT models.

It can be seen from the table, that these results are further strengthened when new variables are added to each of the regressions. The *DA-IFRS* dummy variable maintains its sign and significance (except for Models 2 and 5, in the long-run). Secondly, when RGDP is included as an important indicator of the state of the economy and each of the other control variables is added to the ARDL model, the results are similar (See Models 6-9 in Appendix H.1). This is clear evidence that A-IFRS application may have played a significant role in increasing total foreign investment in the short term. This finding supports the importance of information availability for foreign investment inflows, which is mentioned in a number of studies (Gordon & Bovenberg, 1996; DeFond et al., 2011, Márquez-Ramos, 2011). However, as reported in Table 6.3 there is no clear evidence to imply that A-IFRS has a long run effect on the aggregated investment inflows.

1- Total Foreign Equity (TFE)

Table 6.4 shows the results for TFE. It has been suggested that A-IFRS increased foreign equity; however, while it can be seen that the coefficients of *DA-IFRS* are positive, both in the long and short run, they are non-significant (the only exception is the short run in Model 1). These results may be driven by direct equity, which is expected to show either a limited or no effect from A-IFRS application (Razin et al., 1998), and indicate a significant structural break within the commodity-price boom (see Table 6.1). In the next stage, each component of foreign equity is investigated separately.

Table 6. 4: Total Foreign Equity (TFE)

Control variables included in each model	Model 1 RGDP	Model 2 TOT	Model 3 OPEN	Model 4 EXCH	Model 5 INT
Bound test	5.556**	3.874	4.160	5.901**	7.212***
Short Run Coefficients					
DA-IFRS	0.169** (2.034)	0.118 (1.115)	0.1501 (1.516)	0.1375 (1.5994)	0.0956 (0.9033)
ECT (-1)	-0.266*** (-4.320)	-0.184*** (-3.158)	-0.197*** (-3.365)	-0.2462*** (-4.5189)	-0.3816*** (-4.483)
Long Run Coefficients					
DA-IFRS	0.0927 (0.6691)	0.2897 (1.0421)	-0.0008 (-0.004)	0.1053 (0.6684)	-0.0522 (-0.358)
$R^{\wedge 2}$	0.994810	0.991686	0.992557	0.994626	0.991494
F test	2036.632	1267.365	1416.902	1966.357	1238.485

Foreign Portfolio Equity (FPE)

In the results reported in Table 6.5, the large coefficients of *DA-IFRS* for both the short- and long-run indicate that A-IFRS resulted in a significant increase in foreign portfolio equity investment into Australia. The existence of a long-run effect of A-IFRS is further supported by the fact that the ECT coefficient is negative and significant. The long-run effect could be inferred due to the gradual improvement in compliance, the increasing familiarity of preparers and auditors with the new guidelines, and the emergence of new standards, as well as the increasing effectiveness of enforcement, over time (Bruggemann et al., 2013). These outcomes add depth and richness to the earlier findings (in the literature) that portfolio equity was likely to be affected under IFRS, because, by demanding high disclosure and creating more international comparability, the application of such standards enhanced the public information environment (e.g., Akisik & Pfeiffer, 2009; Brochet et al., 2013; Shima & Gordon, 2011; Wang & Welker, 2011; Yu & Wahid, 2014). These studies also indicate that this effect on portfolio equity is greater in countries where the legal system is effective in protecting the claims of investors; this is the case with Australia (See Porta et al., 1998). However, no previous study has determined the date of the effect, endogenously; neither has any investigated the effect of IFRS using time series data.

Table 6. 5: Foreign Portfolio Equity (FPE)

Control variables included in each model	Model 1 RGDP	Model 2 TOT	Model 3 OPEN	Model 4 EXCH	Model 5 INT
Bound test	6.58**	5.33**	6.89***	6.68***	7.32***
Short Run Coefficients					
DA-IFRS	0.36*** (2.87)	0.29** (2.12)	0.41*** (3.04)	0.32*** (2.64)	0.307** (2.15)
ECT(-1)	-0.26*** (-4.12)	-0.25*** (-3.79)	-0.23*** (-3.91)	-0.23*** (-4.37)	-0.36*** (-4.40)
Long Run Coefficients					
DA-IFRS	0.96*** (3.79)	1.07*** (3.37)	1.42*** (3.80)	0.93*** (3.65)	0.79*** (3.87)
$R^{\wedge 2}$	0.992878	0.990893	0.991896	0.993200	0.990456
F test	1481.162	1156.058	1300.430	1551.902	1102.611

Foreign Direct Equity (FDE)[36]

The results reported in Table 6.6, show that even at the 10 % level of significance, there is insufficient support for the premise that A-IFRS application had any effect on FDE. This means that the structural break in 2003Q4 cannot be attributed to the application of A-IFRS. Rather, it appears to be the result of an economic event that is common to all the control variables and so may be due to the commodity-price boom that was expected to increase FDE inflow to Australia (e.g., Minifie, 2013). This also can explain the insignificant result obtained for TFE (See Table 6.4). These results add further credibility to the notion that because foreign direct investors have a significant degree of control over the companies in which they invest, they are impervious to information asymmetry. This

[36] Although the break date for FDE is outside the A-IFRS event window, it is close to the event window, and to add more robustness to the results, it is considered here as an A-IFRS's break.

conclusion is in line with a number of other accounting and financial studies (e.g., Akisik & Pfeiffer, 2009; Goldstein & Razin, 2006). An alternative explanation was given, attributing the effect on DEL to other factors, such as the high Australian tax-rate and government restrictions, such as discrimination in the approval process for projects, and restrictions on land ownership. These clearly affect the level of such investment in an attempt to protect the country's natural resources, especially those exploited by the mining sector. Golub et al. (2003) estimate that Australia could attract around 45% more foreign direct investment than it does, by lowering foreign direct investment restrictions to the same level as that of the UK.

Table 6. 6: Foreign Direct Equity (FDE)

Control variables included in each model	Model 1 RGDP	Model 2 TOT	Model 3 OPEN	Model 4 EXCH	Model 5 INT
Bound test	11.85***	5.31**	6.46***	7.32***	7.73***
Short Run Coefficients					
DA-IFRS	-0.04 (-0.58)	-0.01 (-0.14)	-0.07 (-0.75)	-0.03 (-0.36)	-0.03 (-0.30)
ECT(-1)	-0.78*** (-6.09)	-0.26*** (-3.73)	-0.25*** (-4.06)	-0.38*** (-4.48)	-0.34*** (-4.35)
Long Run Coefficients					
DA-IFRS	0.07 (1.48)	0.07 (0.42)	-0.09 (-0.49)	0.06 (0.60)	-0.08 (-0.57)
$R^{\Delta 2}$	0.994807	0.990906	0.991824	0.993568	0.990783
F test	2035.285	1157.702	1288.940	1641.273	1142.082

2- Total Foreign Debt (TFD)

Table 6.7 provides only limited evidence that A-IFRS application affected TFD. The results show that while, in the short run, the *DA-IFRS* coefficients are positive, but not significant (except for Model 9 in Appendix H.5), in the long run, they are significant for the second set of models only (See results for Models 6, 7, 8, and 9, in Appendix H.5). The existence of this long-run effect of A-IFRS on TFD is further supported by an ECT, which is both significant and negative; however, the small value of this coefficient indicates the existence of an unstable, long-run relationship between TFD and the regressors. These findings fail to provide strong support for the explanation, based on information asymmetry, which is advanced by a number of studies (e.g., Bharath et al., 2008; Kim et al., 2011). While such a finding is perhaps surprising, it is definitely informative, especially considering that TFD represents more than 60% of TFI (See Appendix A). This may be due to that the fact that the present study focuses on Australia, a country that already had high-quality accounting standards and, therefore, no information asymmetry between foreign-debt providers and local companies prior to A-IFRS application. However, it is important to interpret the results carefully, as they may have been influenced by the increased volatility of earnings and debt-related risk that followed the GFC of 2008 (Adzis, 2012), effects that are evident in the results of the CUSUM test (See Appendix G) under Model 6. There is also the possibility that this outcome is driven by one or two of the disaggregated variables, such as FDD and FPD, which, under the CUSUMQ test, already showed structural breaks in 2008 (See Figure 6.1 above).[37] This

[37]Also, in Figure 5.4, FPD appeared to be affected by GFC more than any other components, which dropped considerably. However, this effect was short-term only (2008), followed by a rapid increase.

instability may have affected the significance of the coefficients of TFD. In view of this uncertainty, it is necessary to examine the effect of A-IFRS, on each component of TFD in turn.

Table 6. 7: Total Foreign Debt (TFD)

Control variables included in each model	Model 1 RGDP	Model 2 TOT	Model 3 OPEN	Model 4 EXCH	Model 5 INT
Bound test	3.004	2.950	8.521***	3.364	5.779**
Short Run Coefficients					
DA-IFRS	0.051 (1.219)	0.061 (1.059)	0.0762 (1.478)	0.049 (1.016)	0.054 (0.999)
ECT (-1)	-0.077** (-2.203)	-0.097*** (-2.715)	-0.158*** (-4.508)	-0.126** (-2.338)	-0.172*** (-3.750)
Long Run Coefficients					
DA-IFRS	0.431 (1.611)	0.1445 (0.531)	0.1729 (1.091)	0.2349 (1.376)	-0.044 (-0.288)
$R^{\wedge 2}$	0.998558	0.997353	0.997953	0.998162	0.997681
F test	7359.343	4003.555	5180.208	5769.698	4571.630

Foreign Direct Debt (FDD)

As reported in Table 6.8, the ECT is negative and statistically significant, indicating that deviations from the long run are corrected, around 12–25% in the following period. This represents a relatively slow pace of re-adjustment to equilibrium. *DA-IFRS* is significant and positive in both the short and long run, indicating an increase in FDD inflows following A-IFRS application. Compared to the aggregated data reported in Table 6.3, the short-run coefficient for FDD is similar, while its long-run coefficient is much larger. Overall, these results support the argument that the structural break in 2006Q4 is due to the application of A-IFRS. The possible explanation is that, since direct debt occurs only between foreign corporations and their affiliates, it is more likely to be used simply to

accrue taxation benefits (IMF, 2009); therefore, it is less affected by information asymmetry. Consequently, consistent with tax-motivated debt and income–shifting incentives, the improved quality of financial reporting and increased international comparability under A-IFRS limited the ability of MNCs to manipulate their profit by using different measurement methods; therefore, the only legal way to transfer profit from Australia was by using internal finance. This interpretation is supported by a number of previous studies. For instance, Márquez-Ramos (2011) found that IFRS application had a significant effect on direct debt in Europe. It was also supported by De Simone (2016), who found an increase in income-shifting in MNCs, after the shift to IFRS. Like the present result, he found that this increase occurred within a two-years period of the change-over to IFRS. Taylor et al. (2011) also found that MNCs in Australia were subject to thin capitalisation, after the introduction of Australian equivalents of IFRS. Therefore, it can be concluded that the improved quality and increased comparability of financial reporting under A-IFRS, reduced the opportunities for entities to engage in profit-manipulation (See Horton et al., 2013), thereby, leading to an increase in FDD as the only legal way of shifting income. This result highlights a very important debate over the legality-versus-ethics of using internal debt as an income-shifting strategy; therefore, it should be considered a fertile area for future research.

Table 6. 8: Foreign Direct Debt (FDD)

Control variables included in each model	Model 1 RGDP	Model 2 TOT	Model 3 OPEN	Model 4 EXCH	Model 5 INT
Bound test	4.21	6.39**	5.39**	4.46	6.80***
Short Run Coefficients					
DA-IFRS	0.16*** (3.84)	0.15*** (3.72)	0.173*** (4.08)	0.16*** (3.89)	0.160*** (4.33)
ECT (-1)	-0.13*** (-4.77)	-0.22*** (-6.13)	-0.12*** (-5.70)	-0.16*** (-4.89)	-0.25*** (-5.42)
Long Run Coefficients					
DA-IFRS	0.94* (1.83)	0.66*** (2.92)	1.26* (1.93)	0.716* (1.71)	0.44*** (2.93)
$R^{\wedge 2}$	0.994583	0.995083	0.994848	0.994509	0.994949
F test	1713.580	1888.944	1802.241	1690.541	1838.452

Foreign Portfolio Debt and Loan:

i- Foreign Portfolio Debt (FPD)

As suggested by the results in Figure 6.1, the GFC may have had a bearing on the behaviour of FPD; therefore, the observations for 2008Q3–2009Q2 are excluded from the study. The results in Table 6.9 show that the *DA-IFRS* coefficients, in both the short and long run, are positive and significant. The existence of this long-run effect is supported by the ECT, which indicates a significant stable effect on FPD from the significant regressors, specifically A-IFRS. This result supports the argument that the structural break in 2004Q3 is due to the application of A-IFRS, a finding that is in line with that of Beneish et al. (2015) and Florou and Kosi (2015), where IFRS adoption had a significant, positive effect on FPD. Compared to that on FDD, however, this effect is smaller.

Table 6. 9: Foreign Portfolio Debt (FPD)

Control variables included in each model	Model 1 RGDP	Model 2 TOT	Model 3 OPEN	Model 4 EXCH	Model 5 INT
Bound test	8.98***	6.48**	11.33***	6.66**	8.34***
Short Run Coefficients					
DA-IFRS	0.10*** (4.33)	0.09*** (3.63)	0.07*** (2.79)	0.093*** (3.84)	0.096*** (3.58)
ECT (-1)	-0.24*** (-4.33)	-0.15*** (-4.42)	-0.17*** (-5.70)	-0.26*** (-4.02)	-0.18*** (-4.56)
Long Run Coefficients					
DA-IFRS	0.25*** (2.82)	0.56** (2.18)	0.38** (2.27)	0.29** (2.30)	0.35** (2.20)
$R^{\wedge 2}$	0.998341	0.997178	0.997771	0.998150	0.997441
F test	6392.492	3754.443	4756.050	5732.528	4141.154

ii- Foreign Loan (FL)

The results reported in Table 6.10 indicate that there is a positive effect on FL in 2005Q3, in both the short and long-run, at the 10% level of significance or better. The short-run coefficient of *DA-IFRS* indicates an increase in FL around 25%, while the long-run coefficient is on average around 90% indicating a larger increase in inflows. The ECT supports the existence of a significant and stable long-run effect of A-IFRS on FL (-1). These findings are consistent with the findings by Kim et al. (2011).

Table 6. 10: Foreign Loan (FL)

Control variables included in each model	Model 1 RGDP	Model 2 TOT	Model 3 OPEN	Model 4 EXCH	Model 5 INT
Bound test	4.36	3.03	6.15**	3.83	4.22
Short Run Coefficients					
DA-IFRS	0.27** (2.49)	0.24* (1.90)	0.26** (2.23)	0.27** (2.38)	0.24* (1.91)
ECT(-1)	-0.18*** (-3.18)	-0.17*** (-2.94)	-0.21*** (-4.28)	-0.17*** (-3.08)	-0.21*** (-3.40)
Long Run Coefficients					
DA-IFRS	0.93** (2.52)	0.73 (1.63)	1.03*** (2.64)	0.83** (2.09)	0.48 (1.35)
$R^{\wedge 2}$	0.990149	0.986391	0.988447	0.988711	0.987242
F test	938.0803	676.4702	798.5033	817.4219	722.2444

Overall, there was a significant increase in both FPD and FL, within the first year of the availability of annual reports under A-IFRS, with structural breaks appearing in them, in 2004Q3, and 2005Q3, respectively. This may be an indication that FPD was more sensitive to the improved-quality of accounting information and greater transparency under the newly-adopted standards, than FL and FPE, both of which showed a structural break in 2005Q3. This explanation has since been successively supported by Ball et al (2008) and Florou and Kosi (2015). There are a number of possible explanations for these results. 1) The introduction of AASB 1, 1047, 132,139 and use of fair value, under A-IFRS, appeared to result in more relevant and reliable information, which allowed debt providers (in portfolio and loans) to estimate the quality of credit more accurately (Florou & Kosi, 2015; Kim et al., 2011). 2) Public financial reporting under A-IFRS played an important role in reducing information asymmetry, especially in view of these standards' requirement for more extensive disclosure. This, in turn, permitted investors in debt to more accurately assess debt risk. 3) Improved financial statements, in terms of international comparability,

post-A-IFRS application, reduced both the information disadvantage for foreign creditors and the risk and so encouraged more investment in cross-border debt (Chan et al., 2013). This last explanation is also consistent with Armstrong et al. (2010), and with Australian studies that provide evidence that A-IFRS increased the relevancy, reliability, and international comparability of financial reporting (Cheong et al., 2010; Goodwin et al., 2008; Taylor et al., 2010). Thus, this thesis concludes that the A-GAAP convergence to A-IFRS may have been associated with more relevant and reliable information, which reduced the information disadvantage for foreign investors, and thus, increased foreign debt, in both portfolio and loan inflows.

Foreign Derivatives (FDR)

In Chapter 5, FDR indicated a positive structural break in 2007Q2, a time close to the implementation of AASB 7. This suggests that the implementation of AASB 7, which required extensive disclosure of quantitative and qualitative information, provided a greater amount of more value-relevant information to foreign investors (Birt et al., 2013). However, the increase in uncertainty during the GFC (2008–2009) may have driven foreign investors to invest in FDR in an attempt to mitigate the risk. Therefore, in this chapter, by using the control variables, I control for the commodity-price risk, credit risk, and exchange-rate risk. The results in Table 6.11 show that even after these risks are controlled for, FDR is still positively affected by A-IFRS application, in both the short and long run. The existence of the long-run effect is further supported by the ECT, which has a coefficient that is both negative and significant. The results of the ARDL model support those of the BP structural break test, in Chapter 5. This suggests that the implementation of AASB 7 may have encouraged foreign debt providers to be more confident about using derivatives. This interpretation is consistent with the suggestion of Birt et al. (2013) that

the introduction of AASB 7 appeared to have resulted in more transparent reporting of risk-management policies relating to hedging activities. In addition, they suggest that the provision under AASB 7, of more qualitative and quantitative disclosure enhanced the information environment for decision-makers. In this way, the introduction of AASB 7 may have attracted more foreign investment in derivatives. To the best of the knowledge, the present study is the first in the field of accounting to investigate the effect of the convergence of A-GAAP to A-IFRS on the foreign derivatives. In addition, no other study has investigated the association between IFRS application and FDR.

Table 6.11: Foreign Derivatives (FDR)

Control variables included in each model	Model 1 RGDP	Model 2 TOT	Model 3 OPEN	Model 4 EXCH	Model 5 INT
Bound test	10.08***	13.48***	10.17***	10.67***	10.73***
Short Run Coefficients					
DA-IFRS	0.63*** (3.49)	0.73*** (4.08)	0.63*** (3.40)	0.63*** (3.49)	0.65*** (3.58)
ECT(-1)	-0.77*** (-5.48)	-0.88*** (-6.41)	-0.73*** (-5.27)	-0.77*** (-5.58)	-0.75*** (-5.41)
Long Run Coefficients					
DA-IFRS	1.16*** (6.85)	1.18*** (8.41)	1.06*** (7.05)	1.12*** (7.61)	1.09*** (6.74)
$R^{\wedge 2}$	0.985035	0.985154	0.983862	0.984953	0.984848
F test	526.5852	530.8561	487.7300	523.6595	519.9971

Other Foreign Debts (OFD)

Like FRD, in Chapter 5, OFD showed a significant structural break, but this time in 2007Q3, a date close to both AASB 7 implementation and the GFC. The results, after the effects of other variables were controlled for, are presented in Table 6.12. While it has been suggested that IFRS adoption increased other debt (IASB, 2010, p.9; Hail et al., 2010), the *DA-IFRS* coefficients, in the short-run, are positive, but not significant, while in

the long-run, they are significant. The only exceptions to this, in the long-run, are those under Model 2 (and Models 6 and 7 in Appendix H.10). These findings fail to support either the information-asymmetry-based explanation of Li et al., (2017), which suggests that IFRS adoption increases other debt (trade credit, in their study), or that advanced by Love (2011), that providers of other debt choose to support their customers during credit squeezes. One possible explanation for this is that prior to the shift to A-IFRS, there was no information asymmetry/trust issue for providers of other debt in countries such as Australia, that have a strong legal system and enforcement regime (Li et al., 2017). To the best of the knowledge, the study of Li et al. (2017) is the only other accounting study to have investigated the effect of IFRS application on other foreign debt; however, unlike the present study, they examined trade credit only. Furthermore, they used cross-sectional data, and covered only a limited time-period around the implementation of IFRS use.

Table 6.12: Other Foreign Debts (OFD)

Control variables included in each model	Model 1 RGDP	Model 2 TOT	Model 3 OPEN	Model 4 EXCH	Model 5 INT
Bound test	4.19	4.55 *	4.48 *	4.50*	4.55*
Short Run Coefficients					
DA-IFRS	0.06 (0.93)	0.07 (0.99)	0.08 (1.25)	0.06 (0.89)	0.08 (1.17)
ECT(-1)	-0.26 *** (-3.60)	-0.25 *** (-3.79)	-0.25*** (-3.70)	-0.28*** (-3.67)	-0.26*** (-3.74)
Long Run Coefficients					
DA-IFRS	0.20 * (1.72)	0.16 (1.10)	0.25*** (2.66)	0.171* (1.68)	0.22* (1.95)
$R^{\wedge 2}$	0.995007	0.994601	0.994963	0.995155	0.994639
F test	2448.306	2263.165	2426.845	2523.317	2279.385

6.4 Conclusion

In this chapter, to ensure that any such structural break indicated in Chapter 5 was indeed, due to A-IFRS application, the ARDL approach was used to control for the effects of other macroeconomic events, such as the commodity-price boom or currency fluctuations, both of which occurred within the same window. To do this, five control variables were chosen: RGDP, TOT, OPEN, EXC, and INT. The results provided compelling evidence of a significant increase in most foreign investment components.

This section provides a conclusion, followed by a discussion of the findings of the study in relation to the research questions established in Chapter 1, and developed in Chapter 4. To compare the findings of the present study with those of past empirical research, the discussion draws on the overview of the latter, in Chapter 3. The results for each component, in relation to the research question, are now summarised in Table 6.13.

Table 6. 13: Summary of the Results Under ARDL Model

Control V.s	*DA-IFRS*	RGDP	TOT	OPEN	EXCH	INT
TFI	Short-run	0.14*** (4.07)	0.14*** (2.82)	0.13*** (3.02)	0.13*** (3.13)	0.14*** (2.87)
	Long-run	0.40*** (2.92)	0.44 (1.29)	0.28* (1.69)	0.42** (2.09)	0.14 (0.99)
TFE	Short-run	0.169** (2.034)	0.118 (1.115)	0.1501 (1.516)	0.1375 (1.5994)	0.0956 (0.9033)
	Long-run	0.0927 (0.6691)	0.2897 (1.0421)	-0.0008 (-0.004)	0.1053 (0.6684)	-0.0522 (-0.358)
FPE	Short-run	0.36*** (2.87)	0.29** (2.12)	0.41*** (3.04)	0.32*** (2.64)	0.307** (2.15)
	Long-run	0.96*** (3.79)	1.07*** (3.37)	1.42*** (3.80)	0.93*** (3.65)	0.79*** (3.87)
FDE	Short-run	-0.04 (-0.58)	-0.01 (-0.14)	-0.07 (-0.75)	-0.03 (-0.36)	-0.03 (-0.30)
	Long-run	0.07 (1.48)	0.07 (0.42)	-0.09 (-0.49)	0.06 (0.60)	-0.08 (-0.57)
TFD	Short-run	0.051	0.061	0.0762	0.049	0.054

		(1.219)	(1.059)	(1.478)	(1.016)	(0.999)
	Long-run	0.431 (1.611)	0.1445 (0.531)	0.1729 (1.091)	0.2349 (1.376)	-0.044 (-0.288)
FDD	Short-run	0.16*** (3.84)	0.15*** (3.72)	0.173*** (4.08)	0.16*** (3.89)	0.160*** (4.33)
	Long-run	0.94* (1.83)	0.66*** (2.92)	1.26* (1.93)	0.716* (1.71)	0.44*** (2.93)
FPD	Short-run	0.10*** (4.33)	0.09*** (3.63)	0.07*** (2.79)	0.093*** (3.84)	0.096*** (3.58)
	Long-run	0.25*** (2.82)	0.56** (2.18)	0.38** (2.27)	0.29** (2.30)	0.35** (2.20)
FL	Short-run	0.27** (2.49)	0.24* (1.90)	0.26** (2.23)	0.27** (2.38)	0.24* (1.91)
	Long-run	0.93** (2.52)	0.73 (1.63)	1.03*** (2.64)	0.83** (2.09)	0.48 (1.35)
FDR	Short-run	0.63*** (3.49)	0.73*** (4.08)	0.63*** (3.40)	0.63*** (3.49)	0.65*** (3.58)
	Long-run	1.16*** (6.85)	1.18*** (8.41)	1.06*** (7.05)	1.12*** (7.61)	1.09*** (6.74)
OFD	Short-run	0.06 (0.93)	0.07 (0.99)	0.08 (1.25)	0.06 (0.89)	0.08 (1.17)
	Long-run	0.20 * (1.72)	0.16 (1.10)	0.25*** (2.66)	0.171* (1.68)	0.22* (1.95)

In general, the results of the ARDL model support those of the BP structural break test, thereby confirming that A-IFRS application significantly increased foreign investment inflows in the short- and long-run. The only exception to this are FDE, which already indicated a structural break outside the A-IFRS event window, and OFD, where the evidence of a significant effect is limited, and in the long-run only. Furthermore, the consistency of the results for all components of foreign investment provides further support for the prediction of this thesis by implying that the introduction of A-IFRS provided more relevant, reliable and comparable information, particularly in view of the requirement for more extensive disclosure under AASB 7, thereby reducing information asymmetry. This, in turn, enabled foreign providers to more accurately assess of risk

aspect of their investments (Birt et al., 2013; Taylor et al., 2010; Yu & Wahid, 2014). The long-run positive effects appear to be present for almost all the debt flow variables. As suggested by Bruggemann et al. (2013) and Callao et al. (2007), this is most likely due to the steady improvement of compliance over time, as preparers and auditors of financial reports gradually became more conversant with the new regulations.

Overall, the results confirm that A-IFRS application played an important role in both the short and long term, in attracting foreign capital to Australia, despite the fact that this country already had a set of high-quality accounting standards prior to application. It confirms the realisation by Australia, of its primary reason for adopting an internationally-accepted set of accounting standards such as A-IFRS, that is, *" [to] facilitate cross-border comparisons by investors, and enable Australian companies to access international capital markets"*(Commonwealth, 2002, p. 102).

CHAPTER7: Conclusion

7.1 Introduction

The objective of this thesis is to determine whether the application of A-IFRS had an effect on foreign investment. This was achieved through a comprehensive analysis of the components of Australia's foreign investment, for the period 1989Q1–2012Q4. These included all types of foreign investment inflows, that is, both aggregated and disaggregated components of debt and equity. Section 7.2 of this chapter provides a summary of the thesis. Section 7.3 discusses the implications of the findings, and Section 7.4 highlights the main contributions of the study, while Section 7.5 considers its limitations. The chapter concludes with Section 7.6, which outlines possible directions for future research.

7.2 Summary of the Thesis

Chapter 2 provided a brief background to the global application of IFRS, including a discussion of its expected benefit. The general expectation was that the use of the new standards would result in reduced information asymmetry between local and foreign investors. This, in turn, was expected to enhance foreign investment mobility, which was the main long-term goal of IFRS application. Consequently, in 2002, the decision was made by the EU countries to apply IFRS as of 1st of January 2005.

The discussion then, was, extended to include the background to A-GAAP's convergence to IFRS, which, for the purposes of this thesis, is termed A-IFRS. The Australian government and its standard-setters considered the application of A-IFRS to be the optimal way to support Australian businesses, in order to improve their capacity to compete, internationally. Such an economic benefit is the consequence of the improved quality and global comparability of financial statements, under A-IFRS. However, as Australia already

had high-quality accounting standards (A-GAAP), it would not reap the full benefits of A-IFRS as the convergence might actually compromise the quality of its A-GAAP, especially under AASB 132, AASB 138, AASB 139, and AASB 7, which are connected with the use of fair value (e.g., Cheong & Al Masum, 2010; Haswell & Langfield-Smith, 2008; Taylor & Tower, 2009).

Chapter 3 reviewed the theoretical and empirical studies in the fields of finance and accounting. These showed that investment mobility, across borders, is affected by information asymmetry and, perhaps, more importantly, by the accounting differences between countries. Thus, foreign investors are aware of being informationally disadvantaged, compared to local investors. Therefore, a single accounting regime, such as the IFRS, could be expected to reduce such differences in accounting standards and thereby increase investor confidence in investing abroad.

The empirical evidence, from both international and Australian accounting studies, showed mixed results. Portfolio debt and equity, as well as loans, increased significantly, following the application of IFRS. However, this effect was associated more with countries where the application of IFRS was mandatory and where the country had strong enforcement. In contrast, evidence of an association between IFRS and increased direct investment was found, more often in developing countries whose local accounting standards differed considerably from IFRS. Moreover, other factors, such as tax rate and restrictions on foreign investment, also play a key role in attracting direct equity. Also, while there was evidence of a significant increase in foreign direct debt, by MNCs, following a country's application of IFRS, no study investigated the connection between foreign derivatives and IFRS; however, there was evidence of a significant association between disclosure concerning the use of the derivatives, and the introduction of IFRS. Finally, as was the

case for foreign direct equity, while there was evidence of a link between other foreign debt and the application of IFRS, there was no such association in countries with strong governance.

Chapter 4 developed a broad, theoretical framework that focused on foreign investment inflows. It argued that foreign investors are informationally disadvantaged, compared to local investors because of the differences in accounting standards and disclosure requirements between countries. Consequently, it was expected that using a set of global accounting standards would reduce such a disadvantage, thereby increasing the relevance and reliability of accounting information and so making foreign investors more confident to invest abroad. According to this conceptual viewpoint, Australia may have benefitted from the introduction of A-IFRS by enjoying increased foreign capital inflows.

Building on the above argument, a research question was established with which to investigate the relationship between the application of A-IFRS and foreign investment inflow. Given that the effect of this application could vary, according to the particular component of such investment, the research question had to describe the anticipated effect on each, individual component of foreign investment: FPE, FDE, FDD, FPD, FL, FRD, and OFD.

Consistent with the above argument, the prediction was that the date of the effect of A-IFRS would also vary among these components, manifesting itself either earlier or later dates from the official implementation. Therefore, the A-IFRS event window had to cover the first transition, consolidation and reporting periods, finally being set at 2004Q3 – 2007Q3.

In Chapter 5, the research design was outlined. This involved the use of a range of structural-break methods. Basically, two types of tests to determine the date of the

structural break (the first exogenously and the second endogenously) were applied. The latter type is considered the principal contribution of the present study. Firstly, a single structural break was identified exogenously using the Perron (1989) IO and AO models. In order to apply these, the comprehensive models, the IO3 and AO3, which allowed for the change to be detected in both the intercept and trend, were used. The date of 2005Q3, which marks the first half-year reporting under A-IFR, was pre-selected as that of the structural break. The results obtained from both models were mixed for all components; this could have been due to an earlier or later effect, or, alternatively, to the presence of more than one structural break in the series. Therefore, next, the test to identify the date of the structural break endogenously was used. Since it was anticipated that there could be more than one break, as the time-series covered a lengthy period of 24 years, the decision was made to apply the Bai and Perron (2003) test. Overall, the findings indicated a significant structural break around the date of A-IFRS application, in all Australian foreign investment inflows, except FDE. The consistency of these results provides further support for the study's prediction. The results revealed that while the aggregated components (TFI, TFE, and TFD) showed a structural break in 2004Q4, different dates were indicated for the disaggregated ones: some components (PEL and FL) had a significant break in 2005Q3; another (FPD) showed the effect in 2004Q3, while the remainder (FDD, FRD, and OFD) registered the break in 2006Q4, 2007Q2, and 2007Q, respectively. To add robustness to the above findings, the Lee and Strazicich (2003) test that endogenously determines two structural breaks was applied. Although this test differs from the Bai and Perron (2003) both identified, approximately, the same break date for each of the variables, falling within the A-IFR event window. This provides further support for the results of the Bai and Perron (2003) multiple structural break test.

In general, since all of the break dates fall around 2005, they are consistent with the effects of the introduction under A-IFRS of a high-quality financial reporting regime with greater comparability. However, an important concern in studies on the impact of mandatory IFRS application is being able to provide evidence that the documented increase in foreign investment is, indeed, a direct benefit of such an application, rather than the result of other institutional or macroeconomic changes that also affected Australia during the application period. Therefore, in Chapter 6, the ARDL model was used to control for the effects of these other variables (i.e., RGDP, TOT, OPEN, EXC, and INT). By considering the application of A-IFRS in isolation, it was hoped that this thesis would confirm that the application of A-IFRS resulted in a significant structural break in foreign investment flows into Australia. For TFI the results strongly supported the notion that A-IFRS had a positive effect on Australian foreign investment inflows. The next steps in the investigation focused on the aggregated components of TFI, namely, TFE and TFD. Firstly, for TFE, the results were not significant. This could have been due to the fact that the various components of TFE react differently and so may have offset each other in the overall effect. Therefore, this chapter then investigated the disaggregated components, namely, FPE and FDE. The results of the ARDL model did confirm that A-IFRS application had a positive effect on FPE; however, they also confirmed the finding, presented in Chapter 5 that there was no such effect on FDE.

Following this, the effect of the application of A-IFRS on TFD was investigated; as in the case of TFE, the results were inconclusive. Therefore, next, the disaggregated components were investigated. Overall, the results confirmed the existence of a positive and statistically significant effect of A-IFRS application on most components of Australia's foreign investment inflow, that is, FDD, FPD, FL, and FDR. The only exception to this was OFD, for which the results were non-significant. This could have been due to a lack of

information symmetry between the OFD providers and the Australian firms whose data were used in the study.

In conclusion, the present study demonstrates support for the premise that, following the introduction of A-IFRS, most foreign investment inflows were significantly higher than before. These findings are consistent with the theoretically based prediction that IFRS application reduces the information disadvantage that is faced by foreign investors. A possible explanation for the increase in foreign investment inflows is that the move to A-IFRS was akin to the introduction of a new regulation, in that it provided the impetus for firms to review their disclosure requirements, both qualitative and quantitative and so modify their existing accounting policies and practices. Such modifications, subsequently, created a financial environment characterised by greater transparency, reduced uncertainty, and enhanced comparability – one that increased the flow of quality information to investors, thereby encouraging them to participate more extensively in foreign capital markets. This greater pressure on firms to enhance the information environment during the post-A-IFRS-application period may, in turn, have been an important driver of increased foreign investment inflows. Moreover, while there is no theoretical support for a long-term effect, the significant long-run coefficients under the ARDL model could signify that in the long-run, as preparers, users, auditors and enforcers become more conversant with, and proficient in, the application of A-IFRS, compliance will improve, and common guidelines and interpretations of the standards, emerge. This is consistent with the suggestion of Bruggemann et al. (2013).

In addition, the disaggregated analysis was undertaken to provide new, deeper insights into inconclusive previous empirical findings and so help to resolve theoretical arguments regarding the effect of IFRS application, in a country such as Australia, which already had

high-quality accounting standards. The results of such an analysis indicate that the increase in foreign investment inflows was, indeed, associated with A-IFRS application. Thus, these findings are consistent with the suggestion of Zeff (1978), that accounting changes are associated with economic consequences and also, with the objectives of the regulator, as stated in CLERP No 9, that:

"In a globalised economy with large and growing cross-border capital movements, high quality internationally accepted accounting standards will facilitate cross-border comparisons by investors, and enable Australian companies to access foreign capital markets at lower cost…" (Commonwealth of Australia, 2002, p. 102).

7.3 Implications of the Findings

The findings of the present study have a number of implications. The first, and most important, relates to the generic role that financial reporting standards can play in promoting overall foreign investment inflows to a country. While some researchers and policymakers assumed that IFRS application by a country such as Australia, would have no effect on its overall foreign investment inflow, such an assertion is challenged by the findings of this thesis, that A-IFRS are likely to be a useful decision-making tool for foreign investors, wishing to invest in Australian projects.

Moreover, the findings from the current study show that A-IFRS application had, on average, a positive and statistically significant effect on foreign investment inflows, with the only exceptions to this being foreign direct equity and other foreign debt. These findings have implications for regulators, standard-setters and financial-reporting stakeholders. For instance, they are potentially useful to the IASB in its quest for a strategy that will encourage the global application of IFRS. In addition, the findings could also be important for any other country considering the adopting of IFRS, such as the US and

Switzerland, or countries that are considering the partial adoption of IFRS, such as Canada. Moreover, it is also important for global organisations such as the IMF and the World Bank, as these are considered to be the most prolific providers of foreign investment as aid loans to developing countries (e.g., Nobes & Zeff, 2016; Camfferman & Zeff, 2018).

In addition, previous studies (e.g., Gordon et al., 2012) have concluded that, following IFRA application, FDE increased in developing countries, but not in developed countries. This is because FDE is driven by more than information asymmetry; it is also sensitive to investment restrictions and tax rates (Golub et al., 2003). By using time-series data for a single country, the present study reached the same conclusion, that is, that there was no significant effect on Australian foreign direct equity inflow, following the application of A-IFRS. This result is economically significant, and, so, may have an important implication for the Department of Foreign Affairs and Trade (DFAT) as the greater the regulations it introduces to protect Australian resources, the greater will be the cost to those investors who do not pose a threat to national interests. DFAT, therefore, may need to consider reducing the regulatory restrictions, such as those on the percentage of ownership, that are faced by foreign direct investors wanting to invest in Australia, as well as simplifying the approval process for projects. Furthermore, the Australian Taxation Office (ATO) may need to take action to devise tax policies that do not deter foreign direct investment, so as to ensure that Australia gets its fair share of such investment, from sources such as MNCs.

Finally, the results also indicate an increase in FDD following the application of IFRS, a finding that was indicated in a cross-sectional study by Márquez-Ramos (2011). This may imply that 'income-shifting', that is, a company shifting its profits to another jurisdiction,

may have been operating (Taylor & Richardson, 2014). While this may appear to be a negative effect of the application of A-IFRS, the research's interpretation is that income-shifting may have always been practised by companies wishing to conceal their true financial performance, but has only come to light because of the greater transparency of financial information, under A-IFRS. Therefore, there is a need for the ATO to curb such a practice, by making thin-capitalisation rules applicable only to corporate groups with foreign affiliates, to prevent the transfer the nation's wealth to other jurisdictions.

7.4 Contributions

The present study contributes, in a number of ways, to the existing literature that investigates the benefits of IFRS application (e.g., Akisik & Pfeiffer, 2009; Callao et al., 2007; Godfrey et al., 2003; Wang & Welker, 2011). Firstly, it sheds light on the question of whether the introduction of A-IRFS positively impacted the level of foreign investment inflow to Australia. As this effect can vary from component to component of foreign investment, each was investigated separately. The findings contribute to the previous literature that has also investigated different components of investment (e.g., Akisik & Pfeiffer, 2009; Ball et al., 2015; Florou & Kosi, 2015); however, the present study extended these investigations by examining ***all*** foreign investment components. In this way, it complements these earlier studies (e.g., Dyckman & Zeff, 2015; Zeff, 1978).

Secondly, this thesis extends event-study research on IFRS, by identifying a positive reaction by foreign investors, around the date of the application of A-IFRS. These findings are consistent with those of previous studies, which also identified a favourable benefit, following transition to IFRS (e.g., Armstrong et al., 2010; Daske et al., 2008; Yu & Wahid, 2014). Such studies used a pre-selected date that pre-empted when the effect of IFRS would be likely to appear. However, the present study chose to identify the date of

the effect endogenously by means of the multiple-structural-break test that is used in the fields of finance and economics. This permitted the data to determine whether any effect of A-IFRS application occurred earlier or later than the actual date of mandated adoption, 2005. This approach has been suggested by Dyckman and Zeff (2015). The endogenously identified structural breaks may help to alleviate an earlier concern about the practice of - the date of an event; such a practice may result in a spurious outcome, as it could fail to capture the targeted effect. The present study also takes into account the influence of other contemporaneous events, such as financial crises and the commodity-price boom, which, if ignored, could result in a biased estimation. In this way, the present study incorporates other disciplines, i.e., finance and economics, into accounting research; this is one of the future lines of enquiry suggested by Dyckman & Zeff (2015).

Thirdly, in international accounting, there is a limited number of studies that investigate the effect of IFRS, using cross-sectional data at a national level. Of these, most focus on the EU countries (e.g., Beneish et al., 2015; Gordon et al, 2012; Ramanna & Sletten, 2014). The present study is the only one to be conducted at a national level, using a single country. By using such an approach, the study avoids having to deal with any differences that may exist between countries, in terms of their date and process of implementation, and their particular type of institutional setting (e.g. economic, political, cultural) (See, Brochet et al., 2013; Camfferman & Zeff, 2018). Moreover, the study examines the case of Australia, that, ex-ante, already had high quality accounting standards, with legislative backing. This fact had informed the principal argument against Australia's adopting IFRS. Therefore, the study complements previous ones by documenting that the application of IFRS had benefits even for a country that already had high quality accounting standards.

7.5 Limitations

As with any research, this thesis, too, has limitations, and these must be taken into account when interpreting the results.

The main limitation is that the analysis is restricted to Australia's inflows and, as such, the results cannot be extrapolated to other countries. For example, countries that were late-adopters or are still non-adopters of IFRS may exhibit different breaks or patterns, either during the transition-to-application phase, or during the time of the study, itself. Similarly, those that adopted IFRS under a different economic structures or policies, may exhibit breaks that differ from those identified in this thesis with an Australian focus. For example, the UK and Germany are service-orientated economies, with few restrictions on foreign, direct investment, while Australia is a commodity-driven economy, where very restrictive regulations concerning such investment, operate

Secondly, the thesis does not investigate the association between A-IFRS and other various components of portfolio debt and loans, such as short- and long- run debt and public and private debt, nor that of A-IRFS and other foreign debt, such as bank deposits, payable accounts, and trade credit. Including these variables in the testing may have produced different results in terms of the effect of A-IFRS application on foreign debt. These issues will need to be dealt with by future studies.

7.6 Directions for Future Research

Despite these limitations, it may be worthwhile for future researchers to replicate, as well as extend, the line of research undertaken by the current study. There are a number of possible directions that this could take:

The first is to extend the current study, by examining the structural breaks of early adopters, such as Australia, and then comparing this data with those of countries that did not adopt IFRS in 2005–2006. If the foreign investment components show a consistent pattern around 2005 for IFRS adopters, and no structural break for non- or late-adopting countries, such research will add weight to the argument that IFRS did facilitate the movement of global capital.

A second possible line of future research is to compare the effect of IFRS application on the components of foreign investment inflow in countries with strong enforcement, such as Australia and New Zealand, with that of countries with less-stringent enforcement regimes and weaker investor and creditor protection, such as Venezuela and Brazil. This would test the findings that the synergy of IFRS application and strong enforcement, positively affects the components of foreign investment (e.g., Daske et al., 2008).

A third possibility for future research would draw on the following theories of agency conflict and adverse selection. Investment in debt can be categorised in two ways: firstly, in terms of its mutuality (short-term or long-term debt); secondly, in terms of its source (private or public debt). Typically, the literature (e.g., Goldstein & Razin, 2006) adopts the view that because of agency conflict, long-term debt is affected more than short-term debt, by information asymmetry. Also, it indicates that due to this agency conflict between managers and outside-investors, which arises from the former having the advantage of being able to access private information, private debt is managed more efficiently than public debt. This creates a situation of information asymmetry (adverse selection) among investors in different types of debt (Ramakrishnan & Thakor, 1984). Therefore, future researchers, by applying a method similar to the one used in this study, might be able to

obtain even more evidence of the effect of IFRS application on information asymmetry among investors in different types of debt.

Moreover, as the present study failed to reach a definite conclusion concerning A-IFRS and other foreign debt, future researchers might consider extending it by investigating disaggregated other foreign debt, such as bank deposits, payable accounts, and trade credit.

The study also indicated that in Australia's foreign investment inflow, there was a significant, positive structural break, in 2007Q2, in derivatives. This was the date of the implementation of IFRS 7 and AASB 7, both of which required a greater quantity and quality of disclosure. This investigation could be extended to include other adopter countries, in order to determine whether or not derivatives component of their foreign investment inflow shows the same structural break in 2007. If it does, this would provide more support for the result of this thesis.

Prior studies (e.g., Nobes & Zeff, 2016) claim that in a country, like Australia, whose GAAP converged to IFRS, the comparability of the resulting financial information may be reduced. In order to determine whether this is so, yet another line of future research may be to compare the results of a country/countries that adopts/adopt the IFRS as issued by the IASB, such as Canada, with those of one/ones, like Australia, whose GAAP converged to IFRS.

Another future line of enquiry may be to extend the present study's finding - that A-IFRS implementation is followed by increased foreign investment inflows - by exploring how this may translate into actual economic benefits, such as a more efficient market, or increased growth and employment (Bruggemann et al., 2013). The study could apply a similar method to the one employed in the present study, to evaluate whether the application of A-IFRS is associated with these economic benefits.

The present study investigates structural breaks using a time series. This could be extended by using panel data estimations of structural breaks, to improve the process of estimating a break for each of the components of foreign investment, in a comparative study between developing and developed countries. This may shed more light on the effect of IFRS application, as Gordon et al. (2012) find that developing countries are more attractive to FDE than developed countries.

The present study also raises some important questions that need to be answered. These are in relation to the increase in direct debt following a shift to A-IFRS. The study by De Simone (2016) claims that profit-shifting by MNC is carried out in three main ways: by manipulating their income through accounting methods, using transfer pricing, and using internal debt among the affiliates. Prior studies provide strong evidence that IFRS, by increasing the quality and the comparability of information, enable international auditors to be more stringent and efficient. This, consequently, lessens the likelihood of entities being able to use accounting methods or transfer pricing to manipulate their income. Future studies in this area could focus on these three profit-shifting methods, to determine the frequency with which they are employed before and after the application of IFRS. Comparing these frequencies would provide direct evidence of the association between IFRS, direct debt and profit-shifting in MNC.

Finally, because of its rich and varied theoretical frameworks, international accounting presents endless opportunities for future IFRS research. This could include comparative studies of countries' political systems, regulatory environments, cultures, and business systems, to determine whether the introduction of new standards, such as IFRS 9, affects such countries differently. Another possibility is to conduct a single-country investigation of the effect of accounting education on the long-run economic benefits of IFRS.

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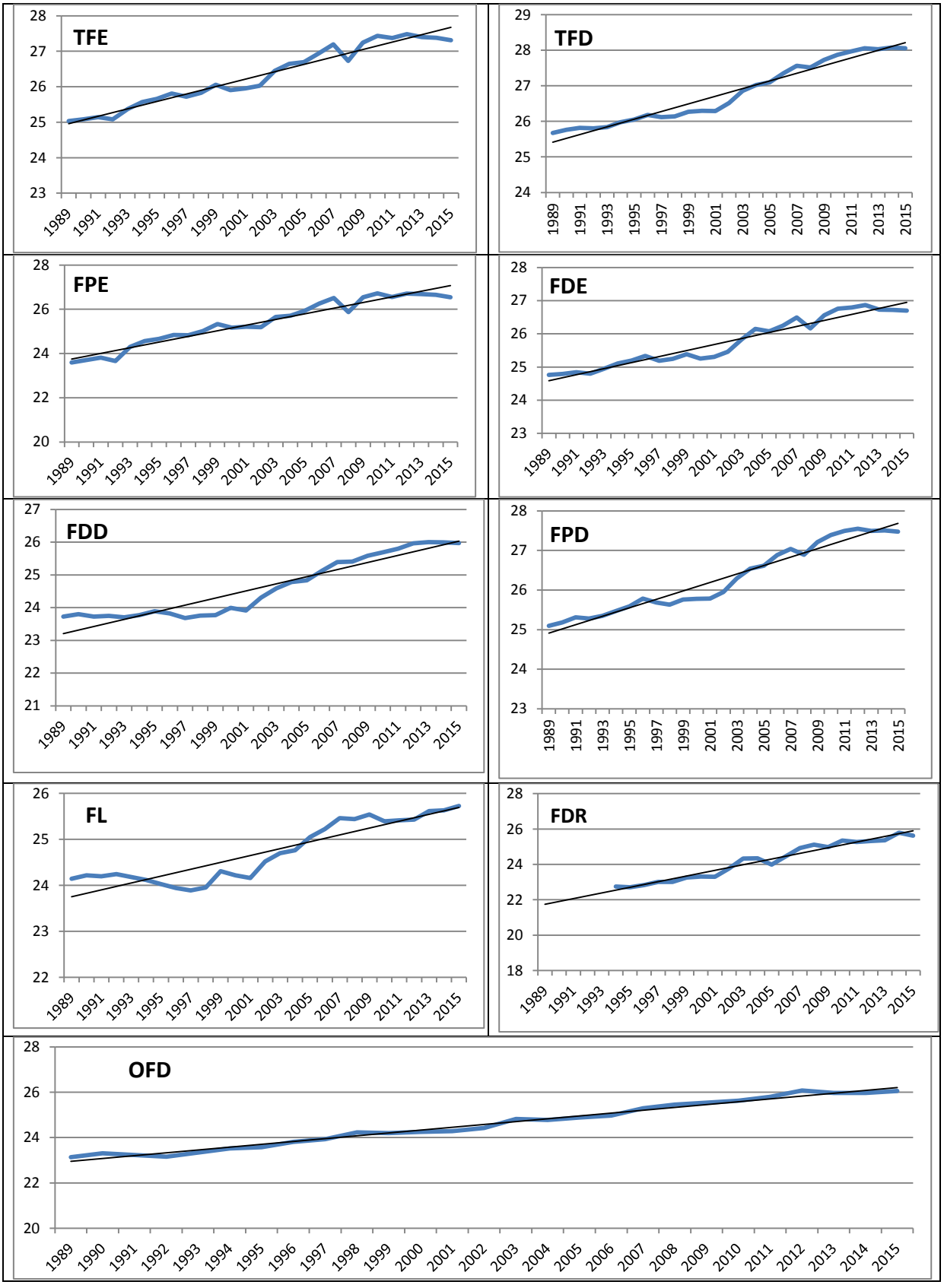
Appendix A: Descriptive Statistics for the Components of Australia's International Investment Inflow

Table A: Descriptive statistics									
Description	Vs.	Mean	S. D	Skew.	Kurt.	J.Bera	Prob.	%	Ob.
Total Foreign	TFI	27.09	0.781	0.415	1.791	8.594	0.013	%100	96
Total Foreign	TFE	26.13	0.790	0.238	1.810	6.572	0.037	0.380	96
Total Foreign	TFD	26.61	0.781	0.510	1.8048	9.8801	0.0071	0.619	96
Foreign Portfolio	FPE	25.21	0.994	-0.11	1.908	4.989	0.082	0.172	96
Foreign Direct	FDE	25.60	0.682	0.461	1.839	8.800	0.012	0.208	96
Foreign Direct Debt	FDD	24.39	0.786	0.692	1.859	12.88	0.001	0.068	96
Foreign Portfolio	FPD	26.10	0.784	0.482	1.849	9.019	0.011	0.374	96
Foreign Loan	FL	24.56	0.59	0.539	1.675	11.66	0.003	0.07	96
Foreign Derivative	FDR	23.95	0.958	0.173	1.564	6.814	0.033	0.038	76
Other Foreign	OFD	24.33	0.89	0.23	1.867	6.018	0.049	0.068	96

Appendix B: Time Sequences of the Australian International Investment Inflows, US$bn, in Natural Logs, 1989 – 2015.



Appendix C: Endogenous Single Break (Vogelsang & Perron, 1998)

In 1998, Vogelsang and Perron developed the Perron (1989) single structural break test into a test with an unknown (endogenous) structural break. This endogenous single structural break test indicates *only the most important structural change* in the whole time series. As this study cover 24 years, there is possibility of the occurrence of more than one important event that could cause a structural break in the foreign investment time series (e.g., the AFC and GFC) and, thus, there is the possibility that *no evidence* will be found of a structural break around 2005. Alternatively, even if one is detected, the presence of any other major event might mask the true date of the effect of the A-IFRS, turning what might otherwise be a strongly positive result, into a weak positive, or even a negative. Nevertheless, it is still of vital importance to this investigation to determine approximately when such a structural break happened in order to decide whether or not it was related to A-IFRS or to other events. Overall, there is week evidence of a structural break within the A-IFRS event window in most cases, which was expected.

Table C: Innovational and Additive Outlier Model for determining the Break Date in Intercept and Slope (IO3 & AO3) (Vogelsang & Perron, 1998)

		Panel A: Innovational outlier (IO3) method			Panel B: Additive Outlier (AO3) method		
Description	V.s	BT	δ	γ	BT	δ	γ
Total foreign investment	TFI	1999Q4	-0.07** (-2.11)	0.0057*** (3.01)	2003Q2	0.268*** (7.984)	0.0167*** (12.70)
Total foreign equity	TFE	2003Q3	0.086** (2.31)	0.0019 (1.27)	2003Q2	0.204*** (3.926)	0.0091*** (4.5254)
Total foreign debt	TFD	1997Q1	-0.05** (-2.22)	0.0028** (2.35)	2002Q4	0.248*** (8.703)	0.0230*** (21.33)
Foreign portfolio equity	FPE	2000Q2	-0.16*** (-2.73)	-0.005** (-2.13)	1993Q1	0.391*** (4.298)	0.0180* (1.9278)
Foreign direct equity	FDE	2003Q2	0.116*** (3.26)	0.006*** (3.18)	2003Q2	0.277*** (6.608)	0.0164*** (10.009)
Foreign direct debt	FDD	2002Q1	0.16*** (4.82)	0.0112*** (3.76)	2002Q1	0.35*** (9.299)	0.0401*** (29.32)
Foreign portfolio debt	FPD	2003Q1	0.087*** (4.09)	0.004*** (2.85)	2003Q2	0.281*** (7.869)	0.0207*** (14.83)
Foreign loan	FL	1993Q1	-0.065 (-1.43)	0.00260 (0.5965)	2002Q1	0.4232*** (6.437)	0.0286*** (11.88)
Foreign derivative	FDR	2007Q1	0.35*** (3.85)	-0.013*** (-2.92)	2007Q1	0.572*** (6.906)	-0.014*** (-2.818)
Other foreign debt	OFD	2005Q2	0.0004 (0.0139)	0.0035* (1.940)	2004Q4	-0.032 (-0.68)	0.0137*** (6.528)

For stationarity, the critical values, using Vogelsang's (1993) asymptotic one-sided p-values, are: values at 1%, 5% and 10% are -5.719131, 5.175710, and -4.893950, respectively for IO3, and -5.719131, -5.175710, and -4.893950 at the 1%, 5%, and 10%, respectively for AO3.
TB is selected as a value that minimises the absolute value on the t-statistic on the parameter associated with a change in the intercept. The max l=11.

Appendix D: Multiple Structural Breaks (Bai and Perron, 2003)

The BP multiple structure breaks are identified in a process consisting of two steps. The first involves testing for structural change while, in the second step, determines the number of breaks:

1- Testing for any Structural Break:

The BP test is applied to test the validity of the null hypothesis (H0), that there is no structure break, against the alternative hypothesis (H1), that there is an unknown number (*m)* of structural breaks. The procedure for detecting structural breaks, suggested by BP, is the following: first, the *UDMAX* and *WDMAX* statistics are calculated. These are double maximum tests, where the null hypothesis, that there are no structural breaks, is tested against the alternative, that there are an unknown number of breaks, to determine if at least one structural break is present:

let Ft(*l*) denote the F statistic for the null hypothesis, of no break structure, versus the alternative hypothesis, of a number of breaks, and let *m* denotes the maximum number of breaks that allowed. The break points *($T_\beta 1$, $T_\beta 2$, ..., $T_\beta m$)* are treated as unknown. The break date estimates are obtained from a global minimisation of the sum of squared residuals. In order to complete the above process, sequential procedure is used to select the number of breaks (Bai & Perron, 2006). To determine whether at least one break occurred, *UDmax* and *WDmax* are used; the double maximum statistic, UDmax= max $1 \leq l \leq m$ sup Ft (*l*), and the weighted double max statistic, WDmax = max$1 \leq l \leq M$w*l* sup Ft (*l*),

where the weights, w*l,* are such that the marginal p-values are equal across values of *l*.

The null hypothesis of both tests is:

H0= no structural breaks are present.

The alternative hypothesis is:

H1: an unknown number of breaks are present.

As mentioned previously, neither the sup Ft, *UDmax* nor the *WDmax* test provides sufficient information about the exact number of breaks, as both simply indicate the presence of at least one break. The significance level of the tests is 5%.

2- The test for *l* as opposed to *l*+1 structural breaks, (*l*+1/*l*):

After the above hypothesis of no structural break has been rejected, the second step of the *B&P test* investigates the possibility of an *l+1*th structural break, since *l* has already been considered in the first step. Accordingly, the null hypothesis is:

H0= there is l break.

The alternative hypothesis is:

H1: There are l+1 breaks.

l breaks, denoted by *T*1, ... ,*Tl, (*the estimated sub-samples), have already been identified, by minimising the sum of the squares of the residuals. Therefore, what is now being sought is an answer to the question of whether a structural break occurs, in one of the sub-samples, around the time of A-IFRS adoption. To do this, the test statistic *Ft* (*l* + 1 / *l*) is used. In addition, to determine the number of breaks, the sequential *sup*Ft(*l*+1/*l*) tests the null hypothesis of *l* breaks, versus the alternative, *l*+1 breaks.

Each of the various types of foreign investment that could possibly be affected by A-IFRS is tested, one-by-one. As mentioned earlier, these tests are carried out at unknown points since each point is considered a potential break point (T_β), and a regression is run to test for each of them, sequentially.

Table D1: Results of the Multiple Structural Break Test for Foreign Investment Inflows ($y_t = c_j + \beta t + u_t$)

Statistics	TFL									
		TFE			TFD					
			FPE	FDE		FDD	FPD	FL	FDR	OFD
Step 1	F. tests									
Sup $\mathbf{F_T}$ (1)	65.29	47.49	37.52	69.18	84.398	112.172	100.244	128.7	39.89	9.932
Sup $\mathbf{F_T}$ (2)	46.95	27.06	30.93	38.97	93.393	121.21	89.234	148.4	71.26	21.12
Sup $\mathbf{F_T}$ (3)	67.17	9.801	33.57	56.14	128.65	113.94	123.50	131.3	50.26	24.51
UDmax	67.170	47.49	37.52	69.18	128.65	121.21	123.50	148.4	71.26	24.51
WDmax	108.69	47.49	54.32	90.84	208.17	184.37	199.83	212.4	89.71	39.66
Optimal number of breaks selected										
Sequential	3	3	3	3	3	3	3	3	3	3
UDmax	3	1	1	1	3	2	3	2	2	3
WDmax	3	1	3	3	3	3	3	3	2	3
Step 2	F test for structural break									
Sup$\mathbf{F_T}$ (1/0)	123.67	47.49	37.52	92.78	143.59	125.83	126.82	136.92	39.89	50.13
Sup$\mathbf{F_T}$ (2/1)	36.66	16.73	24.45	40.96	29.64	43.54	72.44	67.11	50.97	5.59
Sup $\mathbf{F_T}$ (3/2)						28.51		14.52		
Break dates selected										
TB1	1997Q4	2000Q1	1993Q4	1997Q4	1997Q2	1996Q4	1998Q1	1995Q1	2002Q4	2007Q3
TB2	2004Q4	2004Q4	2005Q3	2003Q4	2004Q4	2001Q4	2004Q3	1999Q4	2007Q2	
TB3						2006Q4		2005Q3		
Coefficients										
@trend	0.0258	0.0265	0.0259	0.0233	0.0255	0.0171	0.0267	0.0114	0.0246	0.0289
S.E	0.0010	0.0010	0.0013	0.0011	0.0011	0.0019	0.0010	0.0018	0.0016	0.0006
C0	25.901	24.875	23.493	24.570	25.452	23.494	24.918	24.013	22.117	22.895
S.E	0.0213	0.0254	0.0243	0.0230	0.0250	0.0373	0.0225	0.0282	0.0653	0.0261
Cj_1	5.6589	24.685	23.975	24.246	25.155	23.094	24.561	23.579	22.562	23.158
S.E	0.0540	0.0627	0.0579	0.0581	0.0582	0.0811	0.0538	0.0668	0.1144	0.0550
Cj_2	6.0193	24.984	24.294	24.581	25.566	23.506	24.961	23.835	23.120	
S.E	0.0842	0.0857	0.1115	0.0904	0.0932	0.1267	0.0832	0.1039	0.1441	
Cj_3						24.152		24.448		
S.E						0.1616		0.1479		

Note: @trend is the trend Coefficient; C_i is the intercept for each sub-period; S.E is the standards error for the coefficient.

Appendix E: Testing for Two Structural Breaks in the Present of Unit Root (Lee and Strazicich test (2003, 2004))

Methods that determine a single break date, including the Perron (1989) and the Vogelsang and Perron (1998) tests, ignore the possibility of there being more than one break with unit root. This can lead to loss of information if more than one break does exist. To add robustness to the above tests, the Lee and Strazicich tests are used. These can identify breaks occurring both under the null and alternative hypotheses. Two models are used: One-Break Minimum LM Unit-Root Tests (2004) and Two-Break Minimum LM Unit-Root Tests (2003). Lee and Strazicich (2003) unit root tests can be obtained from the regression:

$$y_t = \delta' z_t + \mathrm{e}_t, \quad \mathrm{e}_t = \beta \mathrm{e}_{t-1} \ \varepsilon_t, \qquad 1$$

Two models of structural break have considered by Lee and Strazicich (2003); model A which allows for intercept's shift, and model C which allows for shift in both intercept and slop. The latter will be used in the present studies. The hypothesis under model C can be interpreted by z_t=1, t, D_{1t}, D_{2t}, DT_{1t} , DT_{2t}.

where DT_{1t}= $t - T_{B1}$ for $t \geq T_{B1} + 1$, and zero otherwise.

where DT_{2t}= $t - T_{B2}$ for $t \geq T_{B2} + 1$, and zero otherwise.

To obtain the LM unit root test statistic, Lee and Strazicich (2003) use the following regression:

$$\Delta y_t = \emptyset \tilde{s}_{t-1} + \delta' \Delta z_t + \mu_t \qquad 2$$

$\tilde{s}_t = y_t - \tilde{\varphi}_x - z_t \tilde{\delta}$, *t=2,…,T,* $\tilde{\delta}$ *are the coefficient in the regression of* Δy_t *on* Δz_t, *and* $\tilde{\varphi}_x$ *is given by* $y_1 - z_t\tilde{\delta}$, *and* y_1, z_t *consists of exogenous variables.*

The unit root null hypothesis is $\emptyset = 0$.The location (λ) of the break (T_{Bj}) is determined by minimising t value.

where $\lambda_j = T_{Bj}/T$ and *j*=1,2, and $\lambda \in [0, 1]$.

Table E.1: Lee and Strazicich (2003) two-break minimum LM unit root test (Model C: two breaks in the intercept and the trend)

Variables in levels	T_{B1}	T_{B2}	$t.a$	Result
TFI	2000Q2	2003Q3	-5.3557 *	Stationary
TFE	2000Q1	2005Q1	-4.974705	Unit root
TFD	1999Q4	2005Q1	-4.9707	Unit root
FPE	1999Q4	2005Q2	-5.3305*	Stationary
FDE	2000Q3	2007Q3	-5.7696 **	Stationary
FDD	1995Q2N	2005Q2	-4.9673	Unit root
FPD	1996Q4	2006Q4	-4.0738	Unit root
FL	1993Q2	2000Q4	-5.4872 **	Stationary
FDR	1996Q1	2006Q4	-4.948374	Unit root
OFD	2000Q3	2006Q4	-5.3637*	Stationary

Critical values of Lee and Strazicich (2003, Table 2) two-break minimum LM unit root test

λ_2	0.4			0.6			0.8		
λ_1	1%	5%	10%	1%	5%	10%	1%	5%	10%
0.2	-6.16	-5.59	-5.27	-6.41	-5.74	-5.32	-6.33	-5.71	-5.33
0.4	-	-	-	-6.45	-5.67	-5.31	-6.42	-5.65	-5.32
0.8	-	-	-	-	-	-	-6.32	-5.73	-5.32

N=not significant

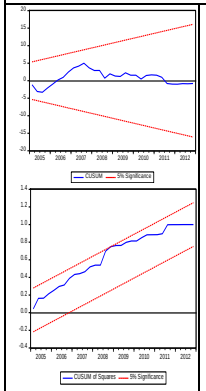
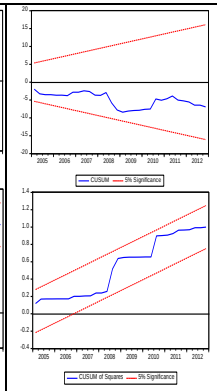
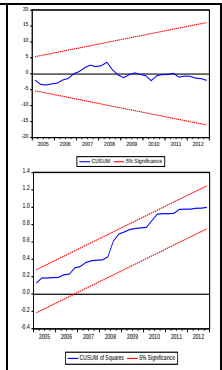
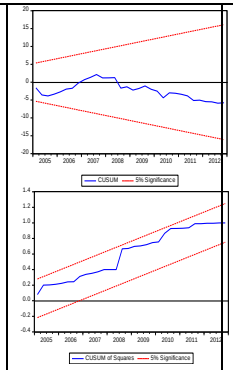
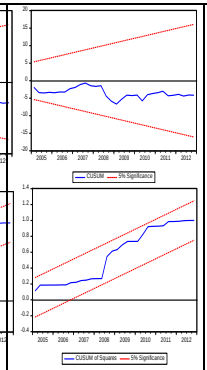
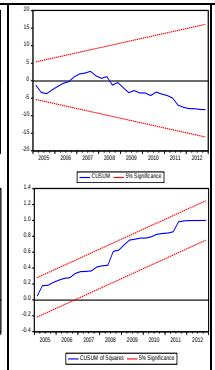
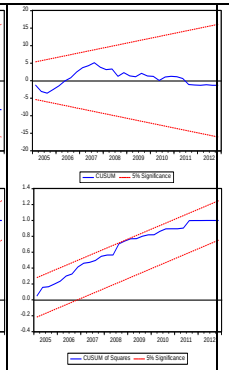
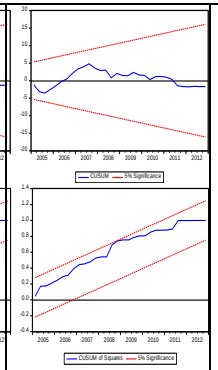
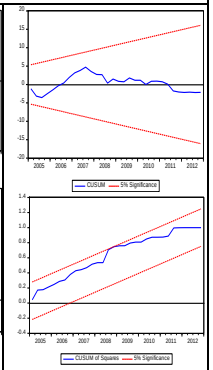
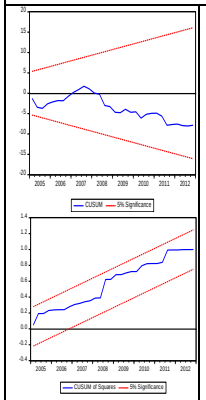
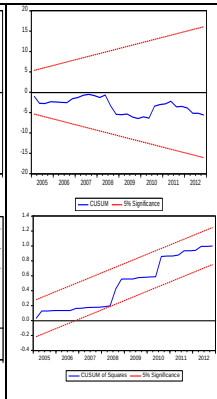
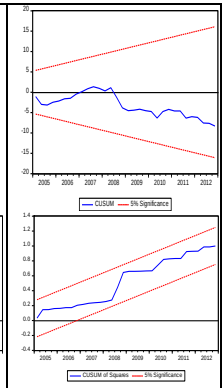
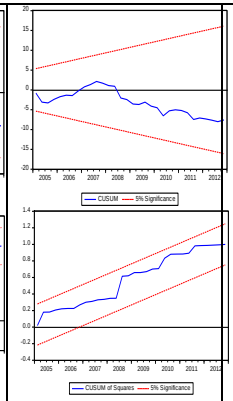
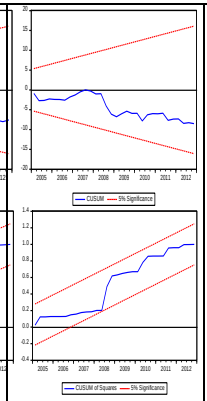
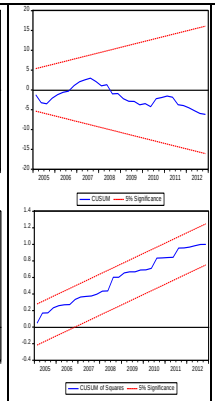
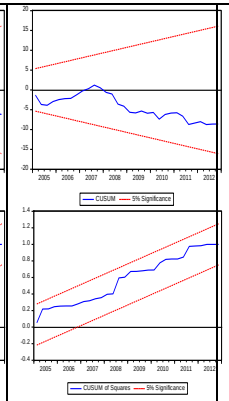
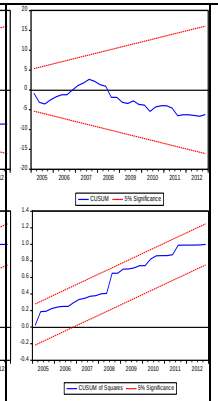
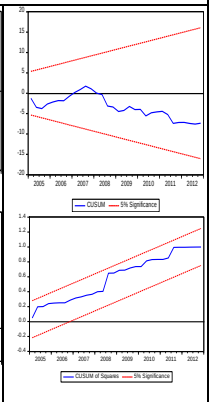
Appendix F: Diagnostic Tests Results (ARDL)

Models	Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
TFI									
Serial Correlation (LM)	0.3967	0.5021	0.6277	0.1037	0.2978	0.3076	0.3426	0.4058	0.4609
Hetroscedasticity (ARCH)	0.0499	0.2584	0.0520^4	0.9799	0.6574	0.0726	0.1400^2	0.0662	0.0689
TFE									
Serial Correlation (LM)	0.1537	0.6068	0.8977	0.4805	0.2392	0.6923	0.7262	0.3841	0.6758
Hetroscedasticity (ARCH)	0.8277	0.0593	0.1109^2	0.8726	0.0750^2	0.3524	0.9852	0.7326	0.8379
FPE									
Serial Correlation (LM)	0.1421	0.3910	0.8261	0.1820	0.2607	0.4492	0.2997	0.0892	0.4170
Hetroscedasticity (ARCH)	0.4339	0.3342	0.9632	0.5291	0.0783	0.5938	0.8713	0.5194	0.6597
FDE									
Serial Correlation (LM)	0.8487	0.4687	0.1052	0.6879	0.9096	0.7601	0.3374	0.9340	0.8120
Hetroscedasticity (ARCH)	0.3994	0.7084	0.9518	0.6649	0.6937	0.5261	0.7868	0.2891	0.5688
TFD									
Serial Correlation (LM)	0.1537	0.2166	0.1824	0.0561	0.2291	0.1534	0.1515	0.1992	0.8684
Hetroscedasticity (ARCH)	0.2016	0.2955	0.0240	0.9195	0.9833	0.1831	0.0753	0.067^2	0.0723
FDD									
Serial Correlation (LM)	0.7793	0.7957	0.6442	0.7960	0.5391	0.8202	0.7188	0.8017	0.4764
Hetroscedasticity (ARCH)	0.8199	0.5740	0.9497	0.8085	0.8196	0.5879	0.9421	0.9365	0.6141
FPD									
Serial Correlation (LM)	0.0546^3	0.3444^1	0.2861	0.1397	0.6103^1	0.0551	0.0599	0.084^3	0.2026
Hetroscedasticity (ARCH)	0.6668	0.4839	0.9436	0.7895	0.8686	0.5568	0.4749	0.2709	0.3479
FL									
Serial Correlation (LM)	0.1687	0.4484	0.8936	0.4341	0.4803	0.1842	0.2803	0.3964	0.0636
Hetroscedasticity (ARCH)	0.6780	0.5537	0.5939	0.8272	0.5840	0.6837	0.6664	0.8741	0.6088
FDR									
Serial Correlation (LM)	0.4710	0.0976	0.6277	0.4396	0.7459	0.2113	0.4225	0.5060	0.4797
Hetroscedasticity (ARCH)	0.9913	0.2694	0.9745	0.9600	0.8303	0.4037	0.8943	0.8672	0.8969
OFD									
Serial Correlation (LM)	0.1000	0.0505	0.1358	0.3104^1	0.1095^1	0.2234^1	0.9903^1	0.279^1	0.232^1
Hetroscedasticity (ARCH)	0.2153	0.1797	0.0922	0.6192	0.2008	0.1994	0.0585	0.6369	0.3799

In serial correlation test, the default lags are two; however, if the result is not significant, different lags are used (1-4 lags) ^

In Hetroscedasticity test, the default lag is one; however, if the result is not significant, more than one lag is used (2-4) ^

Appendix G: Plot of CUSUM and CUSUMQ (ARDL)

Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
TFI								
								
TFE								
								

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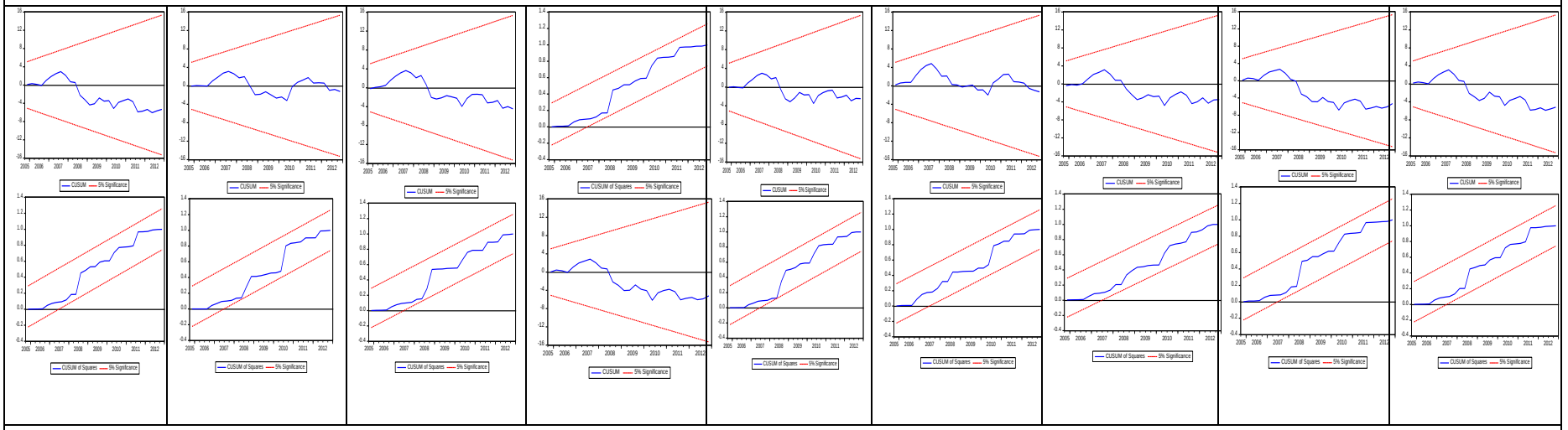
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5% Significance
CUSUM of Squares
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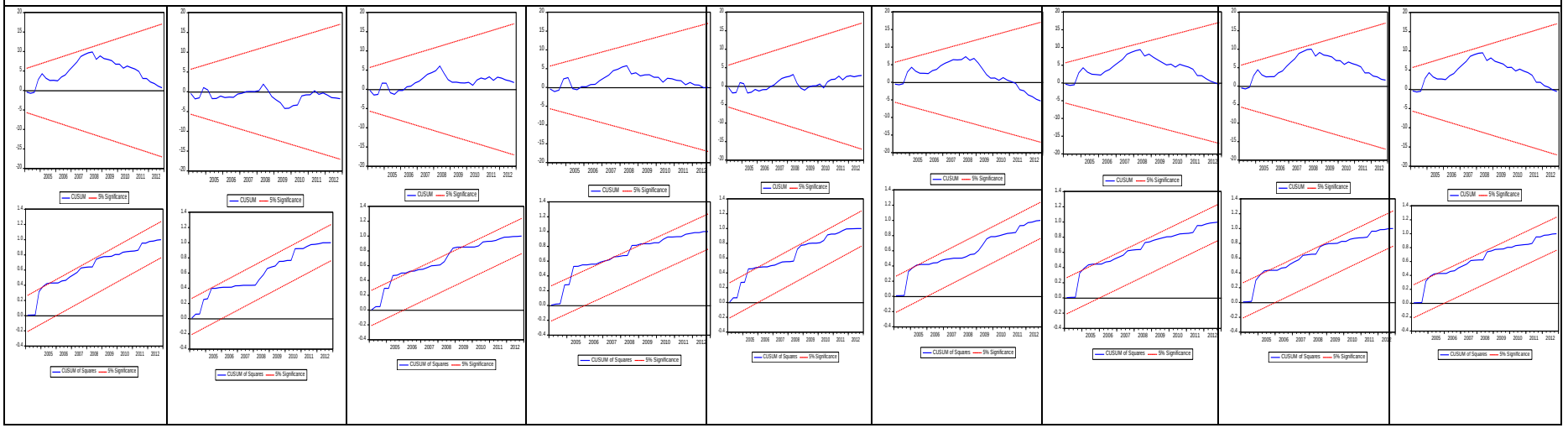
FDE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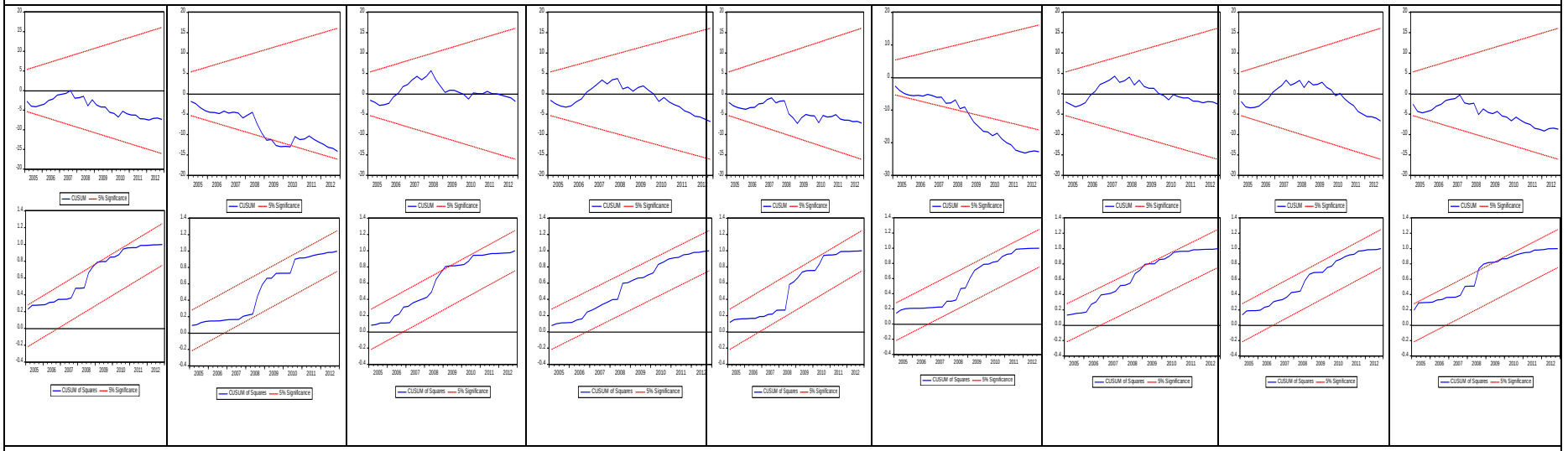
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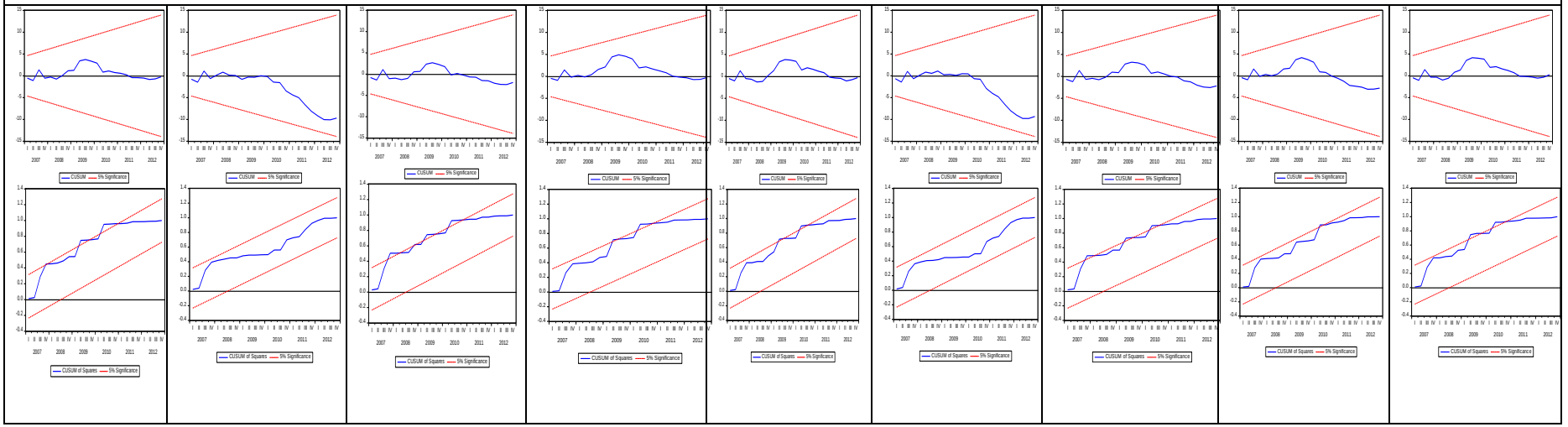
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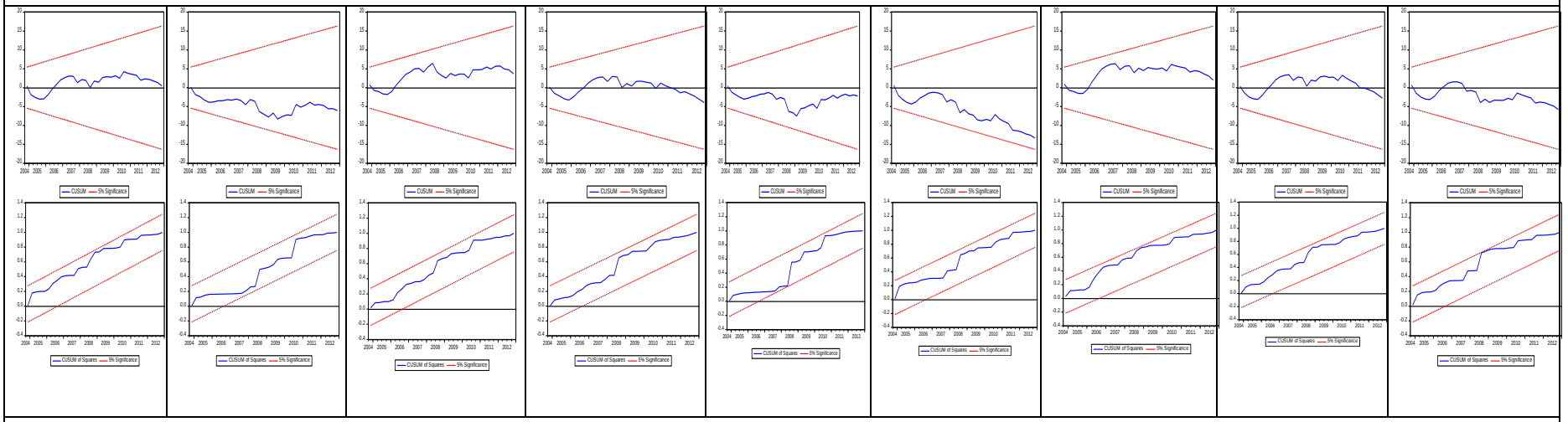
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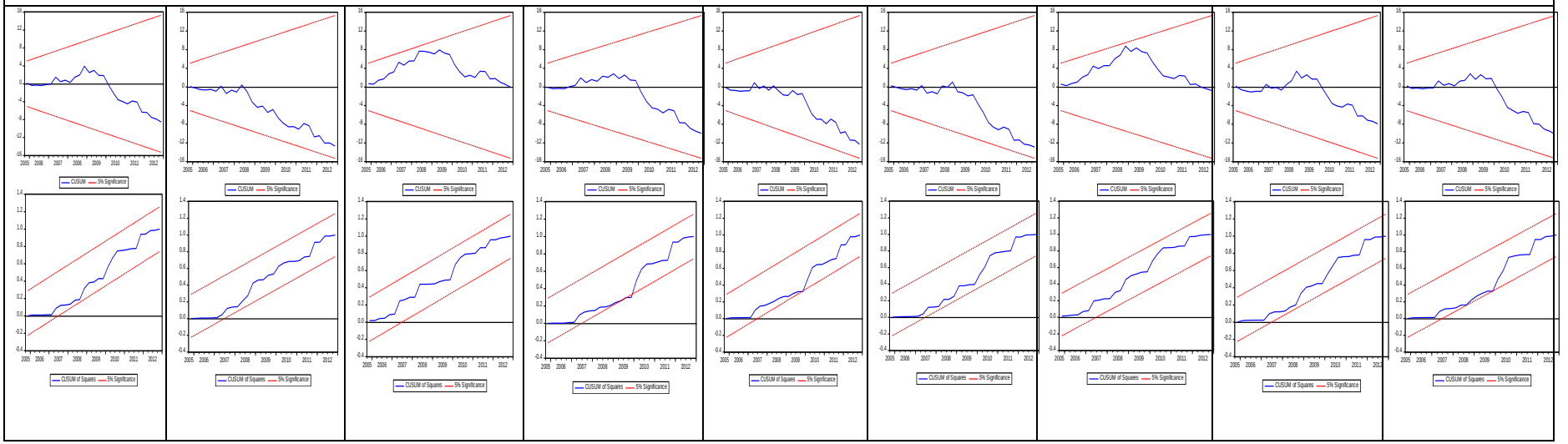
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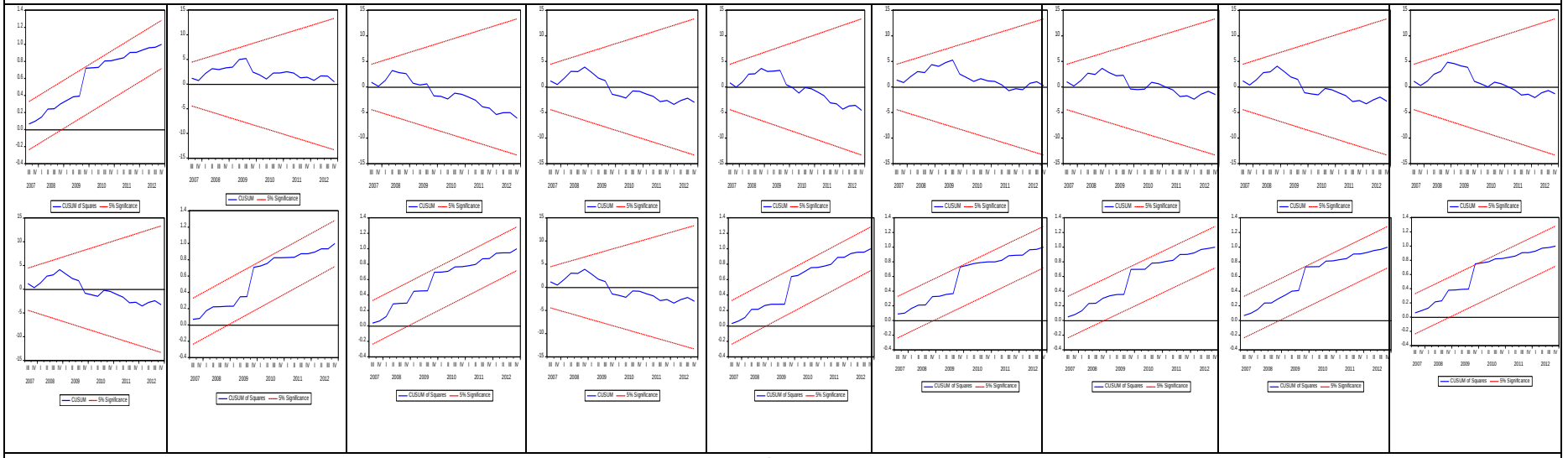
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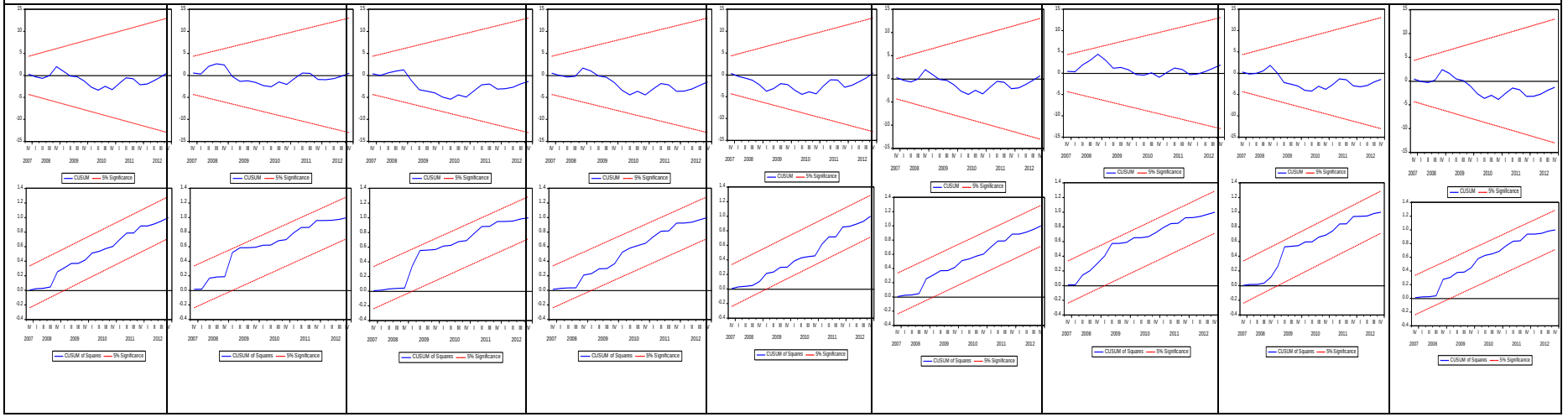
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Appendix H: The Results of ARDL Model

Table H.1: Total foreign investment (TFI)

Control variables included in each model	Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
Short Run Coefficients									
D(TL(-1))	-0.506*** (-5.00)	0.141 (1.375)	0.756*** (6.963)	-0.266** (-2.448)	0.1092 (0.996)	-0.512*** (-4.952)	-0.510*** (-5.129)	-0.505*** (-4.877)	-0.481*** (-4.77)
D(X1)	0.983*** (11.839)					0.9340*** (10.582)	0.916*** (9.282)	0.869*** (5.424)	1.065*** (11.096)
D(X1(-1))	0.335*** (3.689)					0.345*** (3.744)	0.236** (2.308)	0.337** (2.264)	0.314*** (3.359)
D(X2)		-0.582*** (-3.057)	-1.534*** (-4.347)	0.0123*** (8.748)	0.0534*** (3.208)	-0.158 (-1.135)	-0.098 (-0.325)	0.002 (0.833)	-0.018 (-1.423)
D(X2(-1))		-0.085 (-0.412)	-0.086 (-0.176)	0.0039** (2.387)	-0.0327** (-2.194)	-0.081 (-0.576)	-0.520* (-1.808)	0.0002 (0.068)	0.020* (1.689)
DA-IFRS	0.137*** (4.067)	0.140*** (2.82)	0.132*** (3.023)	0.1250*** (3.132)	0.141*** (2.873)	0.138*** (4.098)	0.137*** (4.137)	0.135*** (3.946)	0.135*** (4.073)
D1997Q4	0.026 (1.017)	-0.019 (-0.527)	-0.006 (-0.185)	-0.0053 (-0.186)	-0.028 (-0.804)	0.0223 (0.863)	0.020 (0.770)	0.023 (0.883)	0.035 (1.379)
ECT (-1)	-0.205*** (-3.366)	-0.108*** (-2.643)	-0.170*** (-3.974)	-0.152*** (-2.875)	-0.233*** (-3.550)	-0.179*** (-3.034)	-0.176*** (-3.055)	-0.198*** (-3.348)	-0.235*** (-3.690)
Long Run Coefficients									
X1	0.716*** (4.645)					0.701*** (3.541)	0.648*** (3.024)	0.646* (1.737)	0.638*** (3.984)
X2		-0.381 (-0.399)	-5.697*** (-3.187)	0.008** (2.076)	0.036** (2.362)	0.039 (0.125)	-1.055 (-0.872)	0.001 (0.170)	0.009 (0.885)
DA-IFRS	0.40*** (2.919)	0.441 (1.293)	0.277* (1.692)	0.417** (2.088)	0.1425 (0.986)	0.433** (2.531)	0.407*** (2.665)	0.409*** (2.747)	0.351*** (2.803)
D1997Q4	0.099 (1.249)	-0.120 (-0.700)	-0.075 (-0.749)	0.008** (2.076)	-0.137 (-1.617)	0.120 (1.279)	0.099 (1.108)	0.099 (1.152)	0.0820 (1.126)
$R^{\wedge 2}$	0.998253	0.996168	0.996968	0.997608	0.996126	0.998300	0.998332	0.998271	0.998346
F test	6072.771	2762.036	3493.173	4431.444	2732.364	4378.530	4461.568	4305.201	4500.457

X1 represents the RGDP and X2 represents the rest of variables, one variable each time.
The coefficient of the intercept and the trend has not tabulated to save space.

Table H.2: Total foreign equity (TFE)									
Control variables included in each model	Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
Short Run Coefficients									
D(TFE(-1))	-0.284*** (-2.708)	0.130 (1.268)	-0.015 (-0.168)	-0.202* (-1.928)	0.166 (1.510)	-0.324*** (-2.983)	-0.345*** (-3.366)	-0.280** (-2.633)	-0.251** (-2.314)
D(X1)	1.202*** (8.558)					1.166*** (8.219)	1.137*** (6.876)	0.784*** (3.021)	1.335*** (8.342)
D(X1(-1))	0.322** (2.118)					0.219 (1.497)	0.104 (0.613)	0.250 (1.027)	0.207 (1.309)
D(X2)		-0.969*** (-3.389)	-2.097*** (-4.219)	0.018*** (8.319)	0.073*** (2.838)	-0.581** (-2.503)	-0.075 (-0.144)	0.008** (1.990)	-0.025 (-1.102)
D(X2(-1))		-0.0682 (-0.215)	-1.198** (-2.025)	0.005** (2.145)	-0.032 (-1.345)	-0.082 (-0.326)	-1.023* (-1.951)	0.002 (0.530)	0.033 (1.503)
DA-IFRS	0.169** (2.034)	0.118 (1.115)	0.1501 (1.516)	0.1375 (1.5994)	0.0956 (0.9033)	0.1637** (2.0181)	0.1697** (2.0826)	0.1580* (1.9142)	0.1744** (2.0924)
D2000Q1	0.0011 (0.0193)	-0.056 (-0.755)	-0.010 (-0.143)	-0.0182 (-0.3060)	-0.0855 (-1.1483)	0.0079 (0.1390)	0.0032 (0.0569)	0.0024 (0.0412)	0.0120 (0.2008)
ECT (-1)	-0.266*** (-4.320)	-0.184*** (-3.158)	-0.197*** (-3.365)	-0.2462*** (-4.5189)	-0.3816*** (-4.483)	-0.2398*** (-3.3704)	-0.1722*** (-3.260)	-0.289*** (-4.5712)	-0.2930*** (-4.3547)
Long Run Coefficients									
X1	0.213 (0.770)					0.709** (2.204)	-0.146 (-0.198)	0.669 (1.077)	0.499 (1.505)
X2		-0.812 (-1.105)	-5.041** (-2.058)	0.001 (0.166)	0.022 (1.618)	-0.975** (-2.040)	-2.464 (-0.660)	-0.007 (-0.848)	-0.023 (-1.039)
DA-IFRS	0.0927 (0.6691)	0.2897 (1.0421)	-0.0008 (-0.004)	0.1053 (0.6684)	-0.0522 (-0.3584)	0.2573 (1.5756)	0.0855 (0.4137)	0.12374 (0.9575)	0.189 (1.1181)
D2000Q1	-0.1690 (-1.4719)	-0.227 (-1.4342)	-0.2260 (-1.607)	-0.2230** (-2.0435)	-0.2538*** (-3.077)	-0.0885 (-0.791)	-0.2626 (-1.1227)	-0.1197 (-0.957)	-0.0834 (-0.6395)
$R^{\wedge 2}$	0.994810	0.991686	0.992557	0.994626	0.991494	0.995245	0.995054	0.995176	0.994977
F test	2036.632	1267.365	1416.902	1966.357	1238.485	1560.151	1499.725	1537.710	1476.556

Table H.3: Foreign portfolio equity (FPE)									
Control variables included in each model	Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
Short Run Coefficients									
D(FPE(-1))	-0.142 (-1.353)	0.081 (0.797)	-0.077 (-0.832)	-0.132 (-1.270)	0.125 (1.177)	-0.208** (-2.016)	-0.220** (-2.195)	-0.153752 (-1.4612)	-0.173* (-1.653)
D(X1)	1.231*** (6.290)					1.187*** (6.303)	1.099*** (4.742)	0.478 (1.297)	1.456*** (6.520)
D(X1(-1))	0.309 (1.417)					0.168 (0.825)	-0.151 (-0.644)	0.3611 (1.012)	0.210 (0.950)
D(X2)		-1.108** (-2.958)	-2.388*** (-3.643)	0.020*** (7.075)	0.085** (2.549)	-0.916*** (-2.766)	-0.066 (-0.087)	0.0135** (2.4169)	-0.038 (-1.146)
D(X2(-1))		-0.239 (-0.570)	-1.792** (-2.261)	0.006* (1.687)	-0.042 (-1.278)	-0.011 (-0.030)	-1.808** (-2.330)	0.0008 (0.137)	0.045 (1.368)
DA-IFRS	0.361*** (2.872)	0.299** (2.124)	0.415*** (3.043)	0.320*** (2.641)	0.307** (2.146)	0.356*** (3.015)	0.4384*** (3.562)	0.327*** (2.713)	0.3055** (2.503)
D1993Q4	0.2256** (2.520)	0.14828 (1.507)	0.3038*** (3.144)	0.2020** (2.321)	0.1840* (1.802)	0.2110** (2.516)	0.2780*** (3.204)	0.2032** (2.351)	0.1647* (1.875)
ECT(-1)	-0.260*** (-4.125)	-0.250*** (-3.790)	-0.235*** (-3.910)	-0.235*** (-4.370)	-0.356*** (-4.400)	-0.281*** (-4.293)	-0.184*** (-3.354)	-0.252*** (-4.442)	-0.250*** (-4.733)
Long Run Coefficients									
X1	0.017 (0.052)					0.756** (2.172)	-0.421 (-0.720)	0.6455 (0.7825)	0.4011 (1.1537)
X2		-1.481 (-1.638)	-7.669** (-2.388)	-0.003 (-0.532)	-0.007 (-0.300)	-2.123*** (-2.643)	-6.414 (-1.306)	-0.0130 (-0.886)	-0.0792* (-1.849)
DA-IFRS	0.9573*** (3.787)	1.0701*** (3.374)	1.4197*** (3.796)	0.932*** (3.655)	0.7938*** (3.869)	0.9887*** (4.070)	1.4994*** (2.75)	0.8103*** (2.686)	0.8624*** (3.239)
D1993Q4	0.529*** (4.021)	0.3818** (2.011)	0.9250*** (3.859)	0.454*** 2.808	0.4264*** (3.050)	0.3514** (2.471)	0.839*** (2.989)	0.4014** (2.218)	0.3124* (1.797)
$R^{\wedge 2}$	0.992878	0.990893	0.991896	0.993200	0.990456	0.993773	0.993545	0.993466	0.993375
F test	1481.162	1156.058	1300.430	1551.902	1102.611	1189.748	1147.397	1133.419	1117.715

Table H.4: Foreign direct equity (FDE)									
Control variables included in each model	Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
Short Run Coefficients									
D(FDE(-1))	0.019624 (0.170)	0.180* (1.783)	0.003 (0.032)	-0.038 (-0.345)	0.115 (1.072)	0.016 (0.132)	0.038 (0.327)	0.058 (0.487)	0.030 (0.255)
D(X1)	1.151*** (9.149)					1.114*** (8.284)	1.249*** (8.058)	1.024*** (4.232)	1.209*** (8.208)
D(X1(-1))	0.016 (0.125)					0.046 (0.352)	-0.013 (-0.092)	0.024 (0.109)	0.005 (0.037)
D(X2)		-0.692*** (-2.616)	-1.901*** (-4.165)	0.015*** (7.163)	0.067*** (2.862)	-0.161 (-0.739)	0.445 (0.935)	0.002 (0.660)	-0.014 (-0.710)
D(X2(-1))		-0.053 (-0.191)	-0.574 (-1.114)	0.001 (0.488)	-0.043** (-2.024)	0.061 (0.285)	-0.675 (-1.584)	-0.0003 (-0.086)	0.015 (0.802)
DA-IFRS	-0.041 (-0.583)	-0.0133 (-0.140)	-0.068 (-0.755)	-0.0296 (-0.363)	-0.0290 (-0.301)	-0.0387 (-0.5368)	-0.024 (-0.330)	-0.037 (-0.519)	-0.033 (-0.451)
D1997Q4	-0.072 (-1.430)	-0.133** (-2.002)	-0.122* (-1.939)	-0.098* (-1.7355)	-0.1334** (-1.9685)	-0.0715 (-1.396)	-0.0774 (-1.5293)	-0.0749 (-1.4815)	-0.0608 (-1.177)
ECT(-1)	-0.783*** (-6.093)	-0.259*** (-3.733)	-0.249*** (-4.063)	-0.3818*** (-4.477)	-0.3481*** (-4.351)	-0.753*** (-5.547)	-0.836*** (-5.934)	-0.826*** (-6.1625)	-0.784*** (-6.064)
Long Run Coefficients									
X1	0.898*** (11.748)					0.887*** (8.676)	0.951*** (12.036)	1.057*** (6.441)	0.878*** (9.537)
X2		0.133 (0.340)	-4.208** (-2.347)	0.009*** (3.714)	0.029** (2.260)	0.013 (0.103)	0.672 (1.329)	-0.002 (-1.101)	0.002 (0.357)
DA-IFRS	0.0685 (1.4786)	0.0708 (0.420)	-0.087 (-0.487)	0.0623 (0.5968)	-0.0763 (-0.5748)	0.074 (1.483)	0.0973** (1.992)	0.0799* (1.7416)	0.065 (1.303)
D1997Q4	-0.0437 (-1.235)	-0.292** (-2.480)	-0.306*** (-3.010)	-0.1729** (-2.5025)	-0.3078*** (-3.705)	-0.0422 (-1.1168)	-0.0338 (-0.993)	-0.0320 (-0.9033)	-0.0439 (-1.151)
$R^{\wedge 2}$	0.994807	0.990906	0.991824	0.993568	0.990783	0.994848	0.994979	0.994950	0.994880
F test	2035.285	1157.702	1288.940	1641.273	1142.082	1439.544	1477.166	1468.761	1448.414

Table H.5: Total foreign debt (TFD)									
Control variables included in each model	Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
Short Run Coefficients									
D(TFD(-1))	-0.460*** (-4.745)	0.116 (1.175)	-0.081 (-0.887)	-0.202* (-1.955)	0.013 (0.140)	-0.438*** (-4.410)	-0.452*** (-4.600)	-0.470*** (-4.868)	-0.536*** (-5.985)
D(X1)	0.665*** (9.847)					0.670*** (9.223)	0.633*** (7.2667)	0.715*** (5.314)	0.761*** (9.880)
D(X1(-1))	0.266*** (3.572)					0.296*** (3.820)	0.209** (2.347)	0.326** (2.464)	0.289*** (4.055)
D(X2)		-0.282* (-1.787)	-1.122*** (-4.192)	0.008*** (7.002)	0.053*** (4.254)	0.044 (0.358)	-0.043 (-0.155)	-0.001 (-0.459)	-0.009 (-0.867)
D(X2(-1))		-0.103 (-0.630)	-0.269 (-0.923)	0.003** (2.160)	-0.030** (-2.534)	0.012 (0.101)	-0.037 (-0.148)	-0.001 (-0.561)	0.020* (1.932)
DA-IFRS	0.051 (1.219)	0.061 (1.059)	0.0762 (1.478)	0.049 (1.016)	0.054 (0.999)	0.058 (1.395)	0.0475 (1.130)	0.054 (1.322)	0.078** (2.056)
D1997Q2	-0.068** (-2.396)	-0.062 (-1.527)	-0.038 (-1.047)	-0.063* (-1.875)	-0.063* (-1.640)	-0.065** (-2.263)	-0.068** (-2.300)	-0.070** (-2.443)	-0.042 (-1.570)
ECT (-1)	-0.077*** (-2.203)	-0.097*** (-2.715)	-0.158*** (-4.508)	-0.126** (-2.338)	-0.172*** (-3.750)	-0.122*** (-2.628)	-0.094** (-2.400)	-0.115*** (-3.036)	-0.150*** (-3.008)
Long Run Coefficients									
X1	0.408 (1.159)					0.334 (1.268)	0.277 (0.796)	-0.489 (-0.836)	0.247 (1.026)
X2		-0.007 (-0.009)	-5.692*** (-4.112)	0.010*** (2.929)	0.0550*** (3.714)	0.604* (1.644)	-2.799 (-1.621)	0.017** (2.159)	0.048*** (3.142)
DA-IFRS	0.431 (1.611)	0.1445 (0.531)	0.1729 (1.091)	0.2349 (1.376)	-0.044 (-0.288)	0.304* (1.747)	0.352* (1.725)	0.292* (1.725)	0.267* (1.918)
D1997Q2	-0.051 (-0.378)	-0.307 (-1.633)	-0.1913** (-2.032)	-0.125 (-1.288)	-0.260*** (-2.806)	-0.030 (-0.317)	-0.074 (-0.668)	-0.112 (-1.167)	-0.029 (-0.359)
$R^{\wedge 2}$	0.998558	0.997353	0.997953	0.998162	0.997681	0.998596	0.998614	0.998665	0.998880
F test	7359.343	4003.555	5180.208	5769.698	4571.630	5300.837	5372.296	5578.382	6649.595

Table H.6: Foreign direct investment (FDD)									
Control variables included in each model	Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
Short Run Coefficients									
D(FDD(-1))	-0.259*** (-2.600)	-0.206** (-2.330)	-0.307*** (-3.219)	-0.223** (-2.313)	-0.217** (-2.411)	-0.215** (-2.250)	-0.282*** (-2.867)	-0.253** (-2.517)	-0.273*** (-2.767)
D(X1)	0.124 (0.871)					0.039 (0.269)	-0.042 (-0.249)	0.206 (0.733)	0.195 (1.119)
D(X1(-1))	-0.150 (-1.119)					-0.027 (-0.198)	-0.063 (-0.379)	-0.100 (-0.384)	-0.101 (-0.772)
D(X2)		-0.454** (-2.085)	-0.998** (-2.330)	0.001 (0.680)	0.023 (1.277)	-0.407* (-1.713)	-1.127** (-2.048)	-0.001 (-0.260)	0.009 (0.376)
D(X2(-1))		0.088 (0.354)	-0.084 (-0.180)	-0.001 (-0.931)	-0.018 (-0.971)	0.061 (0.221)	-0.271 (-0.457)	-0.001 (-0.203)	0.002 (0.098)
DA-IFRS	0.157*** (3.843)	0.1534*** (3.7255)	0.1730*** (4.0811)	0.1567*** (3.888)	0.161*** (4.329)	0.1511*** (3.6099)	0.1762*** (4.048)	0.1464*** (3.642)	0.1544*** (4.0148)
D2001Q4	0.0148 (0.3167)	0.0117 (0.2569)	0.0160 (0.3437)	0.0157 (0.3356)	0.0152 (0.3431)	0.0101 (0.221)	0.0219 (0.4649)	0.0029 (0.061)	0.0059 (0.1306)
D1996Q4	-0.0256 (-0.610)	-0.0228 (-0.572)	-0.0173 (-0.4235)	-0.0368 (-0.8736)	-0.0339 (-0.843)	-0.0202 (-0.501)	-0.0252 (-0.611)	-0.0307 (-0.729)	-0.0260 (-0.648)
ECT(-1)	-0.1308*** (-4.774)	-0.2218*** (-6.134)	-0.12*** (-5.700)	-0.1590*** (-4.893)	-0.2527*** (-5.419)	-0.2216*** (-5.402)	-0.1493*** (-5.0408)	-0.1557*** (-4.8776)	-0.2217*** (-4.949)
Long Run Coefficients									
X1	-0.175081 (-0.229)				0.069*** (3.923)	-0.038 (-0.085)	0.366 (0.593)	-0.785 (-0.719)	-0.146 (-0.317)
X2		1.071** (2.053)	3.456 (0.665)	0.003 (0.345)	0.069*** (3.923)	1.134* (1.747)	2.821 (0.598)	0.014 (0.866)	0.073*** (2.800)
DA-IFRS	0.9454* (1.8273)	0.6611*** (2.9214)	1.2585* (1.9312)	0.7157* (1.7150)	0.4421*** (2.9329)	0.6615** (2.1673)	1.0377* (1.8655)	0.6988 (1.5256)	0.4914** (2.108)
D2001Q4	0.3184 (1.0334)	0.2816* (1.7259)	0.5599 (1.1348)	0.2110 (0.8144)	0.0885 (0.7550)	0.2838 (1.5159)	0.4663 (1.1690)	0.1578 (0.5521)	0.1076 (0.726)
D1996Q4	-0.5381*** (-3.101)	-0.3633*** (-3.4633)	-0.5299*** (-3.251)	-0.5007*** (-3.9152)	-0.3606*** (-4.3782)	-0.3590*** (-3.096)	-0.4777*** (-3.1722)	-0.5244*** (-3.538)	-0.360*** (-3.579)
$R^{\wedge 2}$	0.994583	0.995083	0.994848	0.994509	0.994949	0.995094	0.994872	0.994648	0.995066
F test	1713.580	1888.944	1802.241	1690.541	1838.452	1369.038	1309.456	1254.474	1361.440

Table H.7: Foreign portfolio debt (FPD)									
Control variables included in each model	Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
Short Run Coefficients									
D(FPD(-1))	-0.176 (-1.581)	0.351*** (3.467)	0.055 (0.599)	-0.073 (-0.644)	0.225** (2.238)	-0.134 (-1.170)	-0.192* (-1.764)	-0.186* (-1.690)	-0.19534* (-1.812)
D(X1)	0.708*** (8.950)					0.678*** (7.977)	0.625*** (6.475)	0.469*** (3.169)	0.705*** (7.614)
D(X1(-1))	0.171* (1.930)					0.202** (2.239)	0.076 (0.736)	0.340** (2.381)	0.231*** (2.639)
D(X2)		-0.323* (-1.909)	-1.161*** (-4.223)	0.010*** (7.681)	0.053*** (3.948)	-0.034 (-0.247)	-0.164 (-0.541)	0.004* (1.731)	0.001 (0.052)
D(X2(-1))		-0.091 (-0.525)	-0.196 (-0.632)	0.002 (1.613)	-0.037*** (-3.030)	-0.009 (-0.067)	-0.127 (-0.456)	-0.002 (-1.101)	-0.002 (-0.177)
DA-IFRS	0.102*** (4.331)	0.098*** (3.635)	0.069*** (2.787)	0.093*** (3.849)	0.096*** (3.581)	0.1115*** (4.6458)	0.0851*** (3.574)	0.098*** (4.274)	0.1080*** (4.862)
D1998Q1	-0.0003 (-0.014)	0.0016 (0.050)	-0.007 (-0.239)	-0.0394 (-1.132)	0.007 (0.220)	0.0029 (0.1196)	-0.0039 (-0.156)	-0.013 (-0.516)	0.008 (0.344)
ECT(-1)	-0.246*** (-4.328)	-0.147*** (-4.421)	-0.175*** (-5.704)	-0.257*** (-4.020)	-0.1798*** (-4.565)	-0.2867*** (-4.729)	-0.251*** (-4.540)	-0.246*** (-4.419)	-0.301*** (-5.414)
Long Run Coefficients									
X1	0.766*** (5.845)					0.680*** (4.738)	0.615*** (3.394)	0.272 (0.895)	0.577*** (3.608)
X2		0.298 (0.655)	-5.536*** (-3.784)	0.010*** (4.899)	0.048*** (3.405)	0.232 (1.203)	-1.762* (-1.665)	0.008* (1.857)	0.022** (2.271)
DA-IFRS	0.2549*** (2.8250)	0.5598** (2.1822)	0.3795** (2.276)	0.2935** (2.3015)	0.3507** (2.209)	0.2320*** (3.004)	0.224** (2.478)	0.226** (2.549)	0.211*** (3.010)
D1998Q1	-0.0703 (-1.2856)	-0.0638 (-0.5007)	-0.136 (-1.445)	-0.122* (-1.845)	-0.1189 (-1.264)	-0.059 (-1.238)	-0.091 (–1.589)	-0.104* (-1.844)	-0.074 (-1.605)
$R^{\wedge 2}$	0.998341	0.997178	0.997771	0.998150	0.997441	0.998379	0.998440	0.998453	0.998483
F test	6392.492	3754.443	4756.050	5732.528	4141.154	4590.109	4769.906	4810.266	4905.564

Table H.8: Foreign loan (FL)									
Control variables included in each model	Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
Short Run Coefficients									
D(FL(-1))	0.058 (0.584)	0.037 (0.365)	0.049 (0.499)	0.096 (0.958)	0.032964 0.325146	0.0558 (0.5617)	0.0700 (0.7072)	0.0233 (1.1608)	0.0704 (0.7169)
D(X1)	0.808 (6.251)					0.8327*** (6.0551)	0.7399*** (4.5067)	1.1608*** (4.2667)	0.9728*** (6.0088)
D(X1(-1))	-0.261 (-1.791)					-0.2185 (-1.3788)	-0.2305 (-1.3402)	0.0439 (0.1580)	-0.3083* (-1.9614)
D(X2)		-0.256 (-0.926)	-1.906*** (-3.877)	0.010**** (4.602)	0.0545** 2.5294	0.0579 0.2286	-0.2352 -0.4062	-0.0062 -1.46323	-0.0381 -1.5937
D(X2(-1))		0.050 (0.176)	0.866* (1.650)	-0.003 (-1.509)	-0.0386* -1.8044	0.1756 0.6817	0.6825 1.2912	-0.0056 -1.3577	0.0394* 1.7786
DA-IFRS	0.2732** (2.4899)	0.2457* (1.9045)	0.2648** (2.233)	0.2708** (2.387)	0.2399* (1.9109)	0.2617** (2.3493)	0.2606** (2.3547)	0.2819*** (2.589)	0.2607** (2.3188)
D1999Q4	0.1542* (1.7544)	0.1221 (1.1895)	0.1696* (1.782)	0.1514 (1.6168)	0.1128 (1.1184)	0.1480* (1.6721)	0.1503* (1.7000)	0.14930* (1.7124)	0.1453 (1.6223)
D1995Q1	-0.0197 (-0.323)	-0.0381 (-.5311)	0.0020 (0.031)	-0.017 (-0.264)	-0.0431 (-0.608)	-0.0237 (-0.3850)	-0.0089 (-0.1456)	-0.0237 (-0.390)	-0.0299 (-0.4805)
ECT(-1)	-0.178*** (-3.182)	-0.167*** (-2.948)	-0.216*** (-4.280)	-0.168*** (-3.081)	-0.211*** (-3.407)	-0.1776*** (-3.081)	-0.1829*** (-3.299)	-0.1979*** (-3.426)	-0.1813*** (-3.0319)
Long Run Coefficients									
X1	0.702** (2.083)					0.5962 (1.3314)	0.3238 (0.6993)	0.9646 (1.1825)	0.6348 (1.2369)
X2		0.165 (0.211)	-6.0494*** (-2.767)	0.0079 (1.3213)	0.0520** (2.1471)	0.1616 (0.2056)	-2.851559 (-0.9900)	-0.0041 (-0.3160)	-0.0032 (-0.0885)
DA-IFRS	0.9275** (2.525)	0.736 (1.6364)	1.0309*** (2.646)	0.8354** (2.096)	0.4848 (1.3524)	0.8818** (2.3643)	0.9928** (2.5012)	0.9581*** (2.660)	0.8349* (1.9250)
D1999Q4	0.3656 (1.318)	0.1124 (0.3417)	0.3309 (1.1913)	0.2311 (0.7590)	0.0238 (0.1007)	0.3338 (1.1626)	0.3502 (1.2127)	0.3977 (1.488)	0.2793 (0.8727)
D1995Q1	-0.238 (-1.584)	-0.358 (-1.759)	-0.1345 (-0.775)	-0.2745 (-1.5450)	-0.3059** (-2.0735)	-0.2399 (-1.4245)	-0.1773 (-1.0115)	-0.2213 (-1.341)	-0.2832* (-1.871)
$R^{\wedge 2}$	0.990149	0.986391	0.988447	0.988711	0.987242	0.990241	0.990384	0.990595	0.990479
F test	938.0803	676.4702	798.5033	817.4219	722.2444	684.8933	695.2086	710.9799	702.2337

Table H.9:Foreign derivatives (FDR)									
Control variables included in each model	Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
Short Run Coefficients									
D(FDR(-1))	0.039 (0.332)	0.112 (1.037)	0.068 (0.580)	0.054 (0.463)	0.047 (0.418)	0.060 (0.521)	0.004 (0.039)	0.037 (0.315)	0.017 (0.149)
D(X1)	0.134 (0.459)					0.300 (1.008)	0.490 (1.403)	0.441 (0.684)	0.248 (0.668)
D(X1(-1))	0.406 (1.490)					0.365 (1.254)	0.658 (1.817)	0.495 (0.768)	0.161 (0.542)
D(X2)		-0.373 (-0.797)	-0.170 (-0.172)	0.002 (0.338)	0.041 (0.911)	-0.013 (-0.025)	1.236 (0.964)	-0.005 (-0.518)	0.015 (0.264)
D(X2(-1))		0.850* (1.714)	-0.751 (-0.776)	0.006 (1.458)	0.037 (0.819)	0.945* (1.792)	0.531 (0.475)	-0.001 (-0.124)	0.069 (1.253)
DA-IFRS	0.6341*** (3.4912)	0.7278*** (4.0852)	0.6329*** (3.3999)	0.6353*** (3.4923)	0.6479*** (3.5829)	0.6710*** (3.7396)	0.6028*** (3.3173)	0.5960*** (3.2193)	0.6051*** (3.3496)
D2002Q4	0.2463** (2.0084)	0.2611** (2.1610)	0.2869** (2.2243)	0.2587** (2.0869)	0.2618** (2.1040)	0.2391** (1.9941)	0.2460** (1.9852)	0.2342* (1.8573)	0.2136* (1.7569)
ECT(-1)	-0.7716*** (-5.481)	-0.8855*** (-6.414)	-0.7363*** (-5.28)	-0.7774*** (-5.587)	-0.757*** (-5.411)	-0.8497*** (-5.9445)	-0.7414*** (-5.6083)	-0.7720*** (-5.412)	-0.7998*** (-5.7644)
Long Run Coefficients									
X1	-0.316* (-1.652)					-0.181 (-0.777)	-0.270 (-1.120)	0.084 (0.120)	-0.363* (-1.645)
X2		-0.912** (-2.410)	0.473 (0.354)	-0.006* (-1.801)	-0.019 (-0.755)	-0.541 (-1.033)	1.896 (0.865)	-0.007 (-0.589)	0.004 (0.129)
DA-IFRS	1.1603*** (6.8522)	1.1810*** (8.4116)	1.0591*** (7.0536)	1.1178*** (7.6163)	1.0947*** (6.7448)	1.1670*** (7.3087)	1.1684*** (6.565)	1.0807*** (5.0911)	1.1666*** (6.6049)
D2002Q4	0.4972*** (5.0831)	0.4562*** (5.7459)	0.4921*** (4.6515)	0.4868*** (5.4369)	0.4739*** (5.0271)	0.4478*** (4.7832)	0.5254*** (4.7420)	0.4577*** (3.9560)	0.4856*** (4.8566)
$R^{\wedge 2}$	0.985035	0.985154	0.983862	0.984953	0.984848	0.985826	0.985416	0.985141	0.985831
F test	526.5852	530.8561	487.7300	523.6595	519.9971	385.7018	374.6919	367.6631	385.8393

Table H.10: Other foreign debt (OFD)									
Control variables included in each model	Model 1 (RGDP)	Model 2 (TOT)	Model 3 (OPEN)	Model 4 (EXCH)	Model 5 (INT)	Model 6 (RGDP& TOT)	Model 7(RGDP& OPEN)	Model 8 (RGDP& EXCH)	Model 9 (RGDP & INT)
Short Run Coefficients									
D(OFD(-1))	-0.067 (-0.657)	-0.006 (-0.060)	-0.038 (-0.383)	-0.041 (-0.407)	-0.005 (-0.045)	-0.058 (-0.557)	-0.073 (-0.744)	-0.059 (-0.567)	-0.124 (-1.266)
D(X1)	0.258* (1.870)					0.225 (1.514)	0.178 (1.053)	0.212 (0.727)	0.614*** (3.689)
D(X1(-1))	0.238* (1.714)					0.253* (1.679)	0.215 (1.279)	-0.058 (-0.208)	0.196 (1.372)
D(X2)		0.060 (0.229)	-0.673 (-1.438)	0.004* (1.757)	-0.014 (-0.678)	-0.008 (-0.029)	-0.572 (-0.978)	0.001 (0.175)	-0.082*** (-3.357)
D(X2(-1))		-0.398 (-1.521)	-1.023** (-2.162)	0.005** (2.298)	0.028 (1.399)	-0.131 (-0.482)	-1.070* (-1.948)	0.005 (1.206)	0.073*** (3.245)
DA-IFRS	0.0608 (0.9313)	0.0677 (0.999)	0.0817 (1.2529)	0.0575 (0.893)	0.079 (1.1723)	0.0513 (0.7722)	0.0464 (0.7220)	0.0628 (0.9696)	0.0828 (1.3346)
ECT(-1)	-0.257 *** (-3.598)	-0.2514 *** (-3.7877)	-0.252*** (-3.703)	-0.280*** (-3.670)	-0.260*** (-3.742)	-0.265*** (-3.645)	-0.266*** (-4.053)	-0.281*** (-3.661)	-0.245*** (-3.831)
Long Run Coefficients									
X1	0.241 (1.040)					0.170 (0.545)	0.578 (1.958)	-0.283 (-0.561)	0.225 (0.810)
X2		0.338 (0.789)	-1.282 (-0.989)	0.006* (1.666)	0.012 (0.697)	0.266 (0.493)	1.833 (0.891)	0.010 (1.207)	-0.009 (-0.434)
DA-IFRS	0.2057 * (1.7214)	0.1611 (1.1065)	0.2488*** (2.6592)	0.1714* (1.6795)	0.2256* (1.9540)	0.1524 (1.1050)	0.1206 (1.0411)	0.1925* (1.7729)	0.242054* (1.866023)
$R^{\wedge 2}$	0.995007	0.994601	0.994963	0.995155	0.994639	0.995040	0.995326	0.995220	0.995575
F test	2448.306	2263.165	2426.845	2523.317	2279.385	1665.046	1767.462	1728.114	1867.251